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ORIGINAL ARTICLES.

SUPRARENAL THERAPY.

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WHEN we say, as I did in my first paper, that the aqueous extract of the suprarenal capsule is a powerful astringent, or when we say as I shall this evening that it is an ideal heart tonic, we fail to convey its true action. If we seek for words adequate to express in the scientific language of the day the unique action of this drug, the difficulty is to confine it within the lines of division placed by therapeutists and we long to drop the attempt, and exclaim with the patient, "Marvelous!" When we investigate either the physiological action or the therapeutic application of the active principle, we find that rules which have been considered immutable and principles fundamental are set aside when their action would be undesirable. For example, we expect a great dilatation of the blood-vessels to follow a powerful contraction. Of 2000 cases noted in which the suprarenal produced this contraction, the expected dilatation did not follow in one case, and, furthermore, it is a rule that when a minute dose of a drug causes an immediate and powerful effect, that drug is a poison. One two-hundredth of a grain of the extract locally applied will in a fraction of a minute replace the redness of certain inflamed eyes with a condition whiter than normal, and the suprarenal extract is not a poison. No untoward effect has ever followed the local or internal administration of the untainted gland. Two pounds of the fresh suprarenal capsule in the form of an aqueous extract have been swallowed without any apparent ill effects.

The extract when instilled into the eye is non-irritating. Its effect is temporary. A tolerance is not established by its daily use for months. It is not cumulative like digitalis. A suprarenal "habit" is not induced. The extract has no direct effect on the nervous system. The pupil is neither dilated nor contracted by it and the accommodation is not paralyzed. It is not an anesthetic.

When the extract is applied continuously to the healthy skin the parts are whitened after some time, usually in half an hour. If the epithelium be removed the extract whitens the skin in less than one minute. This effect is temporary. When the extract is administered hypodermatically the skin is blanched a dead white immediately and may be incised without primary hemorrhage. The suprarenal is an astringent of other tissues in addition to mucous membranes and the skin. The normal blood supply of the peritoneum, muscle tissue, brain and connective tissue, is lessened temporarily to a marked degree by the local use of the extract. All inflamed tissues are benefited. Granulation tissue is whitened and contracted. Velich lessened the blood supply of sarcoma in rats by the local use of the suprarenal.

Of great importance is the fact that the effects obtained by the local use of the extract can be obtained, although to a less degree, by the internal administration of this remedy. I have seen congestion of the eye, ear, nose, larynx and thyroid gland become decidedly less three minutes after the patient swallowed five grains of the dried gland. Congestion of the lungs, heart, liver, kidneys, bowels, brain, and cord, have been also promptly relieved.

Suprarenal Preparations.—The pulverized dried gland keeps indefinitely and can be readily obtained. For local use in the eye a *fresh* aqueous extract should be prepared by mixing one part of the dried gland with ten parts of water. The mixture is allowed to stand five minutes and is then filtered. The filtrate contains about one per cent. of the active principle. This solution may be sterilized by heat. Chemicals do not preserve the extract in solution without impairing its astringent property in the eye. The solution spoils in a few hours and has then caused infection of the eye and nose.

An *emulsion* of the powder in water has been used in the nose and urethra with benefit. It also must be freshly prepared.

Chemical Properties.—The suprarenal extract is very soluble in water, insoluble in strong alcohol, ether and chloroform. It is a strong reducing agent. The aqueous solution gives with ferric chloride an emerald-green color, and with solution of iodine a beautiful rose-carmine tint. An alkaloid has been isolated by Abel and Crawford, which they have called "epinephrin." It has the properties of the aqueous extract when used in the eye, ear and nose, and has the great advantage over the aqueous extract that it does not spoil readily when in solution.

Physiological Properties.—Oliver and Schäfer[1] find that the extract increases the tone of all muscular tissue. The intravenous injection of minute doses raises the blood-pressure enormously while larger doses of digitalis and ergot produced no appreciable effect. Cleghorn[2] experimented with the isolated dog's heart and found that the strength of the contractions were doubled by the suprarenal, which he believed

[1] Read in part before the New York County Medical Society, February 26, 1900.

acted directly upon the heart-muscle. Dreyer[3] found the active principle in the suprarenal vein, and believed it to be a true internal secretion.

When the suprarenal is administered hypodermically, or by the mouth the effects are different from those obtained by the intravenous method when employed on animals. The blood-pressure is not appreciably raised in the normal individual. When the heart is weak it becomes stronger. I shall refer to this later.

Nost and Throat.—The astringent and hemostatic properties of the suprarenal in diseases of the eye suggest its use in diseases of other mucous membranes. The mucous membrane of the nose is whitened in less than one minute by the local application of the aqueous solution of the extract. This result always occurs. It facilitates examination of the nasal chambers by reducing temporarily swelling of the mucous membrane covering the turbinated bodies and the septum.

It is an adjuvant to cocaine in securing anesthesia. Better results are obtained after the use of the cautery when the parts are first blanched and shrunk with the extract. All forms of tonsillitis are temporarily relieved by the local use of the extract. Congestion of the mucous membrane of the larynx is temporarily relieved also. I do not believe the extract cures any disease of the nose or throat. Its great value is in changing a severe inflammation into a very mild one, so that the usual remedies are better able to cure.

The extract relieves congestion of the nose and throat by the internal administration. In acute rhinitis the swelling of the turbinated bodies has subsided in three minutes after the ingestion of five grains of the dried gland. The pain of tubercular laryngitis has been temporarily relieved in the same manner, the extract lessening congestion of the larynx.

Hay-Fever.—The suprarenal has been used with great benefit in many cases of hay-fever. After the local use of the fresh aqueous solution, the nose opens, the discharge stops and the patient feels comfortable in five minutes. The effect is temporary and the remedy has to be applied frequently, in some cases every two hours. The disease then becomes less severe and the extract is required less frequently. The internal administration is also followed by relief. Cohen, Douglass and others have reported marvelous cures with the suprarenal. See also an excellent paper by H. L. Swain.[4]

Eye Diseases.—My original observations on the therapeutic properties of the suprarenal extract were made in the treatment of diseases of the eye. I have found it of great value in lessening the congestion of conjunctivitis, keratitis, iritis and scleritis. Although the suprarenal is not an antiseptic it has been of great service in purulent inflammations of the conjunctiva and cornea by relieving congestion. It gives tone to the blood-vessels and strength to the heart, thus increasing the resistance of the tissues to the invasion of germs. I believe that I have saved the sight in some cases of purulent keratitis with the extract which without it would have been lost. All my clinical observations of the action of the suprarenal have been of diseases of the eye, ear, nose and throat, my work being entirely in this field. The eye furnishes excellent opportunity for the study of the results and limitations of the action of any drug used locally. In addition to its action in catarrhal and purulent inflammations, the suprarenal is valuable in hastening the absorption of connective tissue which follows these inflammations. I have studied the long-continued use of the extract, in addition to other astringents, in the treatment of opacities of the cornea. Examining with the glass the minute blood-vessels usually found near the opacity are seen to become smaller after the extract has been instilled; coincidentally, the vision is improved. The long-continued contraction of these blood-vessels is followed by absorption of the connective tissue. By the use of this treatment in a recent case of corneal opacity the vison was improved from $^1/_{10}$ to the normal in three months and the corneal opacity disappeared. In those cases of lachrymal stricture and abscess of the sac, in which an operation is required to obtain relief, I have usually been able to cure the disease by the use of the suprarenal supplemented by other local treatment without the use of the knife. I do not believe any words of mine can adequately describe the effect of the extract in such cases. One patient had an acute abscess of the sac with so much swelling that the eyelids were closed. The pain was severe. I syringed the extract frequently into the punctum until, the congestion being relieved, I could press out the pus. In five minutes the nasal duct was open and the abscess drained. The redness, swelling and pain disappeared after the frequent use of the extract for twenty minutes. The patient was cured. In other cases immediate relief was obtained, but the patients were not cured until after some time. Strictures of the nasal duct caused by congestion were opened by the powerful astringent property of the extract and were cured without operation.

After operations on the nasal duct the extract is of great service in lessening congestion during healing. In operations for the cure of lachrymal stricture the extract is of great benefit in securing a painless operation with cocaine, and in lessening hemorrhage. I have in some cases been able to operate bloodlessly. The great value of the extract in lachrymal stricture suggested its use in the treatment of strictures in other parts of the body. I have been told that some urethral strictures were benefited by the astringent property of the extract, and the hemorrhage which usually occurs after internal urethrotomy has been materially lessened by its local use.

The internal administration of the suprarenal lessens congestion in diseases of the eye, although the results are not so decided as when the extract is used locally. In one case of chronic glaucoma the tension was lowered and the vision improved.

The following case of optic neuritis was benefited by the internal administration of the suprarenal:

A woman under treatment for syphilis developed at the same time optic neuritis with a loss of vision. The suprarenal powder was prescribed, gr. iii, t.i.d., which was followed by a marked improvement in her vision. Later the suprarenal was stopped and the vision became worse. When the suprarenal was resumed, the vision improved at once and is now normal. She is still taking the mixed treatment.

Ear Diseases.—The extract when applied to the orifice of the Eustachian tube in the vault of the pharynx lessens the congestion of the drum membrane and of the middle ear in acute and chronic catarrhal otitis media. The tinnitus is lessened and the hearing improved. This effect, however, is temporary. I have been able to improve the hearing in some cases of sclerosis with the extract which were not benefited by politzeration. To obtain permanent benefit it was necessary to employ other treatment with the suprarenal. During the past winter I have found the internal administration beneficial and now prescribe it in all my ear cases which suffer from congestion.

Hemostatic Properties.—The suprarenal is the best hemostatic known. It acts by contracting the small arteries and has no chemical or other effect on the blood itself. I have controlled severe nasal hemorrhage in a "bleeder" by syringing the nose freely with an emulsion of the powder after peroxide of hydrogen, sulphate of iron, gelatin, antipyrine, and cotton plugs had failed. The hemorrhage is stopped promptly, usually in less than three minutes, when the parts can be reached. Since the suprarenal is non-irritating and does not form clots, as does iron, it is not an objectionable hemostatic. Bloodless operations are performed on the eye and nose when the parts can be blanched white. If large veins are seen and opened, hemorrhage naturally follows. This can be controlled by the extract. Secondary hemorrhage is lessened by the extract. The extract does not prevent secondary hemorrhage after lachrymal operations. One may expect secondary hemorrhage after nasal operations when the bone is laid bare. The hemostatic effect of the suprarenal is temporary, and it may be necessary to use it every two hours for a number of times before the hemorrhage finally ceases. I am well pleased with the hemostatic property of the freshly-prepared suprarenal.

Dr. Moschcowitz controlled urethral hemorrhage in a case of hemophilia and there was not any secondary hemorrhage. Otis has used the extract with success in controlling hemorrhage from the bladder. Dr. T. P. Berens has used the extract with cocaine hypodermatically and performed a bloodless plastic operation. Dr. J. A. Mullen used the extract hypodermatically on a patient under ether and prevented hemorrhage during a plastic eyelid operation. Dr. J. A. Moore has also used the aqueous solution hypodermatically to lessen hemorrhage after cutting the meatus. I wish to caution all operators to use a freshly prepared aqueous solution because the hypodermatic use of the spoiled extract, while it blanched the skin a dead white, caused in one case a rise of temperature to 104° F., with other disagreeable symptoms. The aqueous extract has spoiled in one hour.

Addison's Disease.—The suprarenal has been used with benefit in this disease. The literature on this subject is very extensive

Asthma.—S. S. Cohen has used the suprarenal with benefit in some forms of asthma.

Exophthalmic Goiter.—I believe that S. S. Cohen[5] was the first to publish the results of treatment of exophthalmic goiter with the suprarenal capsule. G. W. Crary[6] also has observed improvement in the action of the heart, the tremor, the general muscular strength, and a disappearance of the goiter. Dr. E. Danziger furnished me with the notes of the following case of exophthalmic goiter, in which the suprarenal gave immediate relief: Girl, aged fourteen years, for six months had suffered from discomfort around her throat, palpitation of the heart, throbbing of the carotids and abdominal aorta, with shortness of breath after slight exertion. The thyroid gland was enlarged; the circumference of the neck was twelve inches; the heart sounds were normal; the pulse beats were 120 in a minute. The dried suprarenal was prescribed, gr. ij, t.i.d. When the patient was seen two days later the pulse was 88 per minute, the throbbing of the large arteries was relieved, and the shortness of breath had disappeared. The gland was less swollen and the circumference of the neck had diminished one inch, being now eleven inches. When after two weeks the suprarenal was stopped a relapse followed. When the suprarenal was resumed, the patient again improved. Dr. Danziger had two cases of parenchymatous or cystic enlargement of the thyroid, without general systemic disturbance, in which the suprarenal produced no immediate, apparent benefit. The following case of exophthalmic goiter was benefited by the suprarenal, the general circulation being improved:

A woman with exophthalmic goiter had a jerky pulse of high tension with a labored heart. After five grains of suprarenal were administered the heart's action improved, the throbbing of the arteries diminished, and the pulse became softer and more like normal. The frequency of the pulse was 90 immediately before the administration of the suprarenal; one hour afterward it had not changed. The swollen thyroid gland became softer and the circumference of the neck became one-half inch less in ten minutes.

Heart-Disease.—When the suprarenal extract is instilled into the eye, frequently, enough is absorbed to affect the general circulation as well. I have observed a weak, intermittent pulse of organic heart-disease become strong and regular with relief of the subjective symptoms after the instillation of a one-per-cent. solution of the ex-

tract every two hours in the eye. This case was seen six years ago. Since then the extract has been used in the eye in other cases of heart-disease with benefit. At first it was feared that a remedy so powerful for good would be equally powerful for harm, and that in some cases of heart-disease the use of the extract in the eye would injure the heart. I have looked for the cases in which the extract was contraindicated, but have not found them. It seemed so important to understand the action of the suprarenal on the heart that I made clinical observations of the pulse in all my eye cases with heart-disease in whom the remedy was used. Recently I made some sphygmographic tracings of the pulse before and five minutes after the administration of five grains of the pulverized gland by mouth in twelve cases of organic heart-disease. My conclusions agree with those of Oliver and Schäfer, Valentine, Cleghorn, Boruttan, Greenbaum, Cunningham, Kinnicutt, and others, and are as follows: (1) The internal administration of the suprarenal does not affect the normal heart or normal blood-pressure, or the normal pulse in organic heart-disease. (2) An intermittent pulse becomes regular. (3) A weak pulse becomes stronger. (4) A rapid, weak pulse becomes less rapid and stronger. (5) When anemia or hyperemia of the vessels of the face and of the extremities is present, the administration of the suprarenal is followed by a return to the normal because the increased strength of the heart-beat equalizes the circulation and, consequently, the distribution of the blood to all parts of the body. (6) The action of the suprarenal is temporary. (7) The extract of the suprarenal capsule is the most powerful known stimulant of the heart.

The effect of the suprarenal on the normal blood-pressure by the internal administration has been studied by Grünbaum[7]. He used Oliver's sphygmodynamometer and in no case was there an appreciable rise of blood-pressure even after the ingestion of thirty grains of the dried gland. Kinnicutt[8] has used the adrenals in a few cases of heart-failure, with apparent benefit. Oliver[9] has seen benefit where the vasomotor tone is lowered, as in asthenia and anemia, from the internal administration of the suprarenal. In cyclic albuminuria he also states that he has obtained good results with this drug. (See also "Pulse Gauging," by G. Oliver.) E. O. Hultgren and Oskar A. Anderson[10] found, like Gottlieb, that when the heart's activity was reduced by chloral, an injection of the extract greatly strengthened it. The following case was temporarily relieved after digitalis and some other treatment had failed:

A man, aged sixty years, had general arterial sclerosis with a double aortic and double mitral murmur. The patient was in bed, too weak to rise. I was unable to feel his pulse at the wrist. His hands were cold. He was given five grains of the powdered suprarenal. In ten minutes his hands were warm and the pulse was felt quite strong at the wrist.

CONCLUSIONS.

1. The aqueous extract of the suprarenal capsule when used locally is the most powerful astringent and hemostatic known.

2. By reason of its action on the heart, congestion of the mucous membrane and other tissues of the eye are relieved to a less degree by the internal administration.

3. Congestion of other organs in addition to the eye are relieved by the local and internal use of the extract.

4. The extract is useful in all forms of inflammation and in inflammations in all parts of the body.

5. The suprarenal is the strongest known stimulant of the heart.

Finally, we may say that the reason why so little disturbance has followed the use of this powerful substance for six years by so many observers is that we are using a material which is necessary to the normal functions of the body, and I wish to repeat that within the limits of its sphere of activity no other substance can take its place.

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BIBLIOGRAPHY.

[1] Journal of Physiology, 1895.
[2] American Journal of Physiology, 1899.
[3] American Journal of Physiology, 1899.
[4] New York Med. Jour., 1898.
[5] Jour. Am. Med. Assoc., July 10, 1897.
[6] New York Med. Jour., April 16, 1898, p. 543.
[7] Journal of Physiology, May 11, 1899.
[8] Am. Jour. Med. Science, July, 1897.
[9] Brit. Med. Jour., 1895, vol. II., p. 561.
[10] Skandinav. Arch. f. Physio., IX., 1899, p. 73, 312.

SOME DIRECTIONS AS TO THE CARE OF THE HAIR.[1]

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THERE are certain matters in regard to the care of the hair that have not been taught to some physicians in their student days, and about which they are still somewhat at sea because they have found no mention of them in their books. About these they seek advice. Perhaps such matters may seem trivial to some of you, but they do not seem trivial to some of your patients. Therefore, they seem to me to be of sufficient importance to warrant my bringing them briefly to your notice.

Management of the Hair During and After Fevers.—It is well known that the hair falls after fevers and parturition, as well as after other exhausting drains on the general nutrition of the body. The laity know this, and in such cases are constantly asking if we cannot do something to prevent the fall of the hair. After the patient is convalescent, his or her, especially *her*, friends are eager to have the head shaved and cross-shaved, and cite cases of those who have had this

[1] Read before the Medical Society of the State of New York, Albany, January 30, 1900.

done and now have such magnificent hair! How shall we answer these questions? We can answer the first by saying that nothing can be done during the illness to prevent the fall of the hair. The hair falls not because of the dryness of the scalp in consequence of the fever, but because its nutrition has been interfered with by the illness. This we know because the hair will fall in some non-febrile disease. All we can do is to keep the hair and scalp in order by gentle brushing and combing, and by rubbing into the scalp once or twice a week the least little bit of vaseline or oil. To the demand for permission to cut the hair short or to shave the scalp, we should give emphatic denial. It is a serious business to shave the scalp of a woman and chiefly benefits the barber, who, by the way, is the one most urgent to have it done. It dooms the woman to months of wearing a wig, and to many subsequent months of remarks from the thoughtless and cruel because she, perforce, is a member of the short-haired sisterhood. As it is impossible to say how much of the hair will fall, and as it is rare for enough to fall to render "doing up" impracticable, there seems to be no reason to subject the woman to the positive annoyances of the shaving with advantages so exceedingly doubtful.

Well, shall we do nothing but simply fold our hands and let Dame Nature look after the hair? It would be much wiser to do this than to do some things that are done; but we can do more. We should allay the fears of the patient and her friends by assuring them that although the hair may fall for a few weeks, it will grow in as well as before the fever if they will obey directions. They must be directed to brush and comb the hair every day. At this they will throw up their hands in horror and exclaim: "Why, doctor, I am afraid to brush my hair as so much comes out." We can tell them that that need not disturb them in the least, as only the already damaged hair can be pulled out in that way and that the sooner they are out the better. Once or twice a week a little of a pomade composed of a dram of precipitated sulphur in an ounce of a good, soft cold-cream should be gently worked into the scalp. Every two or three weeks the hair and scalp should be washed, and a little of the pomade applied as soon as the hair is dried. As the patient regains her strength, if she follows this method of caring for the hair, she will be rewarded by having as fine a growth of hair as she had before, if not finer. Of course, the older a woman is the less the probability for this much-to-be-desired outcome.

How Often Shall the Scalp Be Washed?—This is another question often asked. We can answer that once in two to four weeks is sufficient, so far as the hair is concerned. In fact, it does not seem to make much difference to the hair whether it is washed or not. It is more cleanly to wash the hair and that is the greatest reason in favor of doing it. It is bad to wash the hair too often, and daily sousing of the hair, as is the too common practice, is pernicious.

Soaps.— We will be asked what soap is best to use in washing the scalp, and many women who make their living by caring for the hair have some mysterious soap which they use, vaunt, and try to sell to their customers, but the composition of which they will not reveal. As a matter of fact, except in a very few conditions of the scalp, it makes little difference what sort of soap is used, provided it is made by a good manufacturer. The most convenient soap is one that is liquid, such as the tincture of green soap. Whatever soap is used must be thoroughly washed out with plenty of water. After washing the scalp a little pomade or oil must be rubbed into the scalp to take the place of the natural oil that has been removed by washing.

Use of Pomades.—The men of my father's generation habitually used pomades on the scalp. To protect the chair coverings from the grease on their heads tidies came into vogue. Then the pendulum swung the other way, and now pomades of all kinds are tabooed. That there has been a great increase in baldness among the young men of the present generation is a general impression, although I know of no statistics to support or refute it. Some fifteen years ago, when I first became interested in the study of diseases of the hair, I accepted the teaching of the time that pomades did no good, and, becoming rancid, did positive harm. With enlarging experience I am becoming more and more convinced that I was wrong and that one reason why the hair is lost so early now-a-days is because the sons have forgotten the teachings and practice of their fathers in regard to the use of pomades. They neither use pomades nor seek to stimulate the natural oily supply to the hair by systematic brushing. Instead they daily wet their heads with water to enable them to arrange their hair. By not using pomades and by wetting the hair instead of brushing it, their hair becomes more and more dry, dandruff increases, and their hair falls. I believe that if boys were trained to brush their hair thoroughly every night and morning, and had a little pomade that will not turn rancid, such as contains sulphur or salicylic acid, for instance, rubbed into their scalps once a week or so, and avoided wetting their heads, baldness in the rising generation would not be so prevalent as it is in this.

Cutting the Hair.—We are sometimes asked how often the hair should be cut. It makes no difference how often it is cut. It is purely a matter of taste. No one would think of asking how often the nails should be cut, but cuts them as often as they become too long for comfort or taste. Cutting the hair will neither increase nor decrease the amount. It will stimulate the fine hairs to become coarser, but when they have reached their normal growth cutting will have little influence on them. It is always advisable to direct that the split ends of the long hair of women should be cut off above the cleft, as this will prevent the cleft from traveling up the hair. It is best not to have the hair of a girl cut after she

is ten or twelve years old, because if left to itself and given adequate care it will grow more silky than if it is cut.

Singeing.—Of all the foolish fashions in regard to the care of the hair that of singeing is the most ludicrous. It is founded on an antiquated idea, and is a revival of an antiquated fashion. Away back in the dark ages it was thought that when the hair was cut it bled from the cut ends, or, at least, lost some fluid nutritive substance. Therefore, it was argued, we should singe the ends to prevent this loss, just as it once was the practice to sear wounds to stop hemorrhage. As the hairs are not hollow tubes like arterioles and neither bleed, exude, nor ooze in any way when cut, the operation has no foundation in fact, nor does it do any good. I have seen scores of barbers' customers who have gone about like singed cats for months and without benefit.

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NEUROLOGICAL OBSERVATIONS IN THE HAWAIIAN ISLANDS.[1]

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IT WAS my privilege during this summer to spend six weeks in these islands, and I present herewith a synopsis of the observations made. The Hawaiian Islands are remarkable for the uniformity of their climate. At sea level the average summer temperature is about 85° F., and the winter temperature about 80° F., and the difference between night and day is not more than ten or fifteen degrees. They have a great variety of climates so far as high and low levels are concerned, and dryness and moisture. The islands are very small in size, comparatively, and have elevations upon them that range from 4000 to 14,000 feet. Trade winds are almost constantly blowing in the same direction, that is, from the northeast, and these high elevations precipitate the moisture of one side, making the rainfall on the windward side very considerable, and on the leeward side almost nothing. Then, by ascending the mountain-sides one may secure a much lower temperature, on Mount Loa, even to the freezing point. We spent a week on the leper island, at an elevation of 1500 feet, and found the nights cool enough for blankets, so that it is possible to secure on the islands almost any desired climatic condition. The general effect of the climate on the average Anglo-Saxon at sea level is one of depression, and as a consequence neurasthenia is not uncommon, especially among the women, and they feel it necessary periodically to leave the islands and return to the Coast for the purpose of recuperation. Several women informed me that three years was the longest time they could remain on the islands at sea level without suffering profound symptoms of neurasthenia, and as the most desirable places on the islands are at sea level, it will not be a good place to send our neurasthenic patients. The remarkable uniformity of temperature makes it a desirable place for the spinal scleroses generally. These diseases do not prevail there to anything like the extent that they do in this country. The climate is also desirable for cases of interstitial nephritis. I had an opportunity of observing the relations of the islands to insanity, and obtained from Dr. Humphries, who was in charge of the Hospital for the Insane, at Honolulu, much information. This hospital is a very creditable one. The buildings are well constructed and commodious, and the climate makes it possible to use an out-of-door treatment quite universally. During my visit every patient was out-of-doors. The grounds are abundantly shaded with fine specimens of the umbrella tree and the cottages are provided with large verandas. The types of insanity among the natives are generally mild. It is not usual to have the violent manifestations of mania. The violent cases that were at the hospital at the time of my visit were either foreigners, or else they were mixed in their nationality. The proportion of insane to the population as near as could be ascertained is about one to a thousand. Notwithstanding the great prevalence of syphilis among the natives, Dr. Humphries informed me that they have never had a case of general paresis in the institution from among the native population. I saw one paretic there, but he was an Anglo-Saxon. Paranoia is a form of insanity that has not been observed among the natives. There was one such case in the hospital at the time of my visit, but he was an Englishman. Suicides are practically unknown among the natives. There have been suicidal cases in the hospital, but they are usually Chinese or Japanese.

We had a very good opportunity of making observations on the subject of leprosy, and inasmuch as we now possess these islands, Cuba, Puerto Rico, and the Philippines, the question of leprosy is one of great importance to the profession. I have no doubt our armies returning from our new possessions will bring this disease with them. Leprosy was introduced in the islands in the year 1848 from China, and the authorities have been endeavoring by the most vigorous segregation of the lepers to stamp it out; they are making some headway in the work, but it is scarcely commensurate with the energy of their methods. There have been more than 6000 lepers consigned to the Island of Moloki since the work of segregation began, thirty-five years ago. There are now 1200 lepers in this settlement. It is an ideal place. They occupy a tongue of land at one end of the island, and separated from the balance by a precipice that is from three to five thousand feet high. We can from personal experience testify to the extreme difficulty of getting down this precipice to the colony and returning to the other part of the island. The lepers are taken care of here and provided with anything necessary for their comfort by the general public. There are some interesting things to be noted about the children. They have in Honolulu, near the receiving station for lepers, a home conducted by

[1] Read before the Chicago Neurological Society.

the Sisters for girls; they have in this home some thirty or forty girls who were born in the settlement of leprous parents, and when they were found to be clean at birth or non-leprous, they were taken from the settlement and brought to this home, and in the experience of the Sisters, who have been running this home for fifteen or more years, there has not been a case of leprosy developed there. The Board of Health feel that they are getting the disease under control, but it is not a very rapid process. In conversation with the members of this Board, we ascertained that the proportion of the anesthetic or nervous form of leprosy on the islands does not exceed 25 per cent. The tubercular forms constitute fully 50 per cent. of the cases, and the balance are of the mixed type. Suspected cases of leprosy are sent to a receiving station near Honolulu, and there once a month the physicians of the Board of Health meet for their diagnosis. It was my privilege to be present at one of these investigations, which began at noon and ended at six o'clock, during which time some forty lepers, the accumulation of the preceding month, were examined. Out of this number there were only four neurotic cases, one of which was put on the suspect list, and was not sent to the settlement, but was required to report to the health officer at stated intervals until the case was fully disposed of. Several of the cases were disposed of in a similar way, and some of them were postponed until the next Board meeting, a unanimous decision of the Board being necessary to send a case to the leper settlement. The physicians of this Board, who are experts, indeed, on this important subject, have abandoned the hereditary etiology, regarded it as contagious, and account for its rapid spread among the natives by their lowered resistance, a consequence of the great prevalence of syphilis and their socialistic tendencies. They live principally on two articles of diet, one called poi, and the other is fish. This poi is eaten by the natives out of a common vessel, and with their fingers; the ordinary native dips his first and second fingers into the poi-dish and carries the poi to his mouth, and then takes a bite of his fish, and has no fear of leprosy. They make a persistent effort to secrete the suspected cases from the health officers, so that many of the cases that were at this examination were cases of long standing; that is, from two to three years' duration, and these cases had doubtless widely scattered the bacillus before they had been brought before this examining board. The failure of efforts at early segregation is probably one reason why the work of stamping out the disease has not been more successful. It does not prevail to any great extent among Anglo-Saxons. During our visit to the settlement we found only six Anglo-Saxons there. The opinion prevails that the contagion occurs largely through the oral and nasal secretions. Active catarrhal symptoms were present in the great majority of the cases, and the propagation of the disease from the oral secretions is facilitated by their habits of eating and of smoking each other's pipes. We had an opportunity of examining numerous cases of the anesthetic form. We were told that these cases usually begin with an erythematous eruption and with hyperesthesia, which later gives place to the anesthesia and later still to the motor symptoms. The ulnar and peroneal nerves are the usual seat of the attack. The invasion of the ulnar nerve by the neuritis develops the characteristic claw-hand of the leper. The diagnosis is made on the condition of the member and of the nerve; the diffused enlargement of the nerve, amounting in some cases to three times its normal size, an enlargement that is not uniform or symmetrical but nodular. The probability is that the bacillus begins its work in the sensory end organs in the skin; that it travels up the sensory nerves until it reaches a place where the nerves become mixed, sensory and motor, and when this progressive interstitial neuritis involves the motor and sensory filaments of the nerves, the muscular atrophy and the contractions become manifest. The difficulty in diagnosis is the differentiation of the leprosy from a neuritis that may have its origin in other causes. In the case of a young girl who was examined at this session of the Board and put upon the suspect list, there were very few erythematous patches, none of the white patches, slight enlargement of the nerve, but muscular atrophy and contractures. She will be kept under observation, reexamined in the course of a few months, and, of course, if found leprous, will be sent to the settlement.

We saw several cases of amputation of the toes and fingers from the progression of the atrophic processes, and these cases are difficult of differentiation from Reynaud's disease. Some of the cases presented a symptom complex that made them difficult to differentiate from syringomyelia. In doubtful cases the microscope is of great service in diagnosis, but it requires an expert to differentiate the bacillus of leprosy from the bacillus of tuberculosis.

The subject of incubation is important. In the case of a convict who was inoculated, the disease began to develop in about five years thereafter. In another case the period of inoculation fixed with some degree of accuracy was followed by positive manifestations of the disease in about the same number of years. The tuberculous cases run their course with rapidity. The anesthetic cases are long-lived. There are at the settlement several cases of about twenty years' duration.

As to treatment, nothing whatever has been found that can reasonably be called curative. Hot baths afford a great amount of relief and diminish, in some cases at least, the rate of progression. These baths have been medicated in a great variety of ways, but it is the impression of Dr. Oliver, who has been for many years the resident physician of the settlement, that it is the heat and not the medicament that produces the results.

Dr. Oliver's general plan of treatment is mildly alterative, tonic, and when necessary anodyne. He has seen excellent results from the very free

use of strychnine. Climate exercises a considerable controlling influence over the progression of the disease. Some of the lepers who have been taken to the settlement and given residence in the mountains of Japan have done so remarkably well that they have seemed almost to recover.

The great problem in connection with this disease is the prophylaxis. The efforts at segregation on the island have not been followed by as good results as its advocates had hoped for in the beginning, largely due, I think, to the fact that it is impossible in the very nature of things to enforce it early and thoroughly. There is no doubt that many of the cases of leprosy begin as nasal catarrh, and the man goes around spreading the disease broadcast for years before such positive evidence of the disease presents itself as to justify his segregation, and how to control this is a great problem. I think the health officers are doing everything in their power to make it a success, and the failure is due to the long period of incubation and the insidious onset of the disease.

In connection with the differentiation of progressive muscular atrophy, Reynaud's disease, Morvan's disease and syringomyelia, I think the recent observations of Zambico are very interesting. This physician considers that these several forms of nervous disease are simply modified forms of leprosy, the remnants of the leprosy that disappeared from Europe during the fifteenth and sixteenth centuries.

ALCOHOL AS A GENERAL STIMULANT AND HEART TONIC; ITS USE TO THE ANIMAL ECONOMY IN HEALTH AND DISEASE.[1]

BY T. J. HILLIS, M.D.,
OF NEW YORK.

THE author of this paper will not follow in the footsteps of others who have preceded him, writing on the subject he has chosen to present to you to-day, that is, to give a long and labored description of the chemistry of alcohol and go into a wearisome and detailed account of its physical properties, as they are fixed and no doubt well known to all. In omitting this usual introduction a load is lifted off your shoulders, as it was not from mine when I had to sit time after time and with excruciating agony listen for what appeared an age to that which had better be read from a text-book, as most of it was only a clumsy copy.

The writer will not burden your minds with an array of citations from the various writers on the subject of which he addresses you to-day; he believes that little is gained by such quotations other than to weaken the force of his own argument and further complicate and muddle certain features of the question to be determined. The opinions and conclusions of any writer I might here refer to are known to all of you, then from me it would be only coming second-hand, and the time allotted me now is so brief that I cannot afford to deal in second-hand material, as Dr. Bristow once said, "Let the searcher after facts compare the notes of original writers and draw his own conclusions, then, while making his comparisons he will not be buried in a heap of references and enveloped in a fog of uncertainties, which, after all, lean on the investigations of a single man, but padded and quilted to suit the purpose of others who are trading on the brains of the original thinker."

For this reason nine-tenths of the medical literature of to-day is conspicuous by its dearth of ideas and absolutely worthless on this account, the men who write the books being, some of them, plagiarists and most of them copyists and compilers. In consequence of this state of affairs the market is glutted with so-called medical books, magazines and pamphlets that make our tables groan with a weight of stuff that should have reached the waste basket long before it was set up in type.

B writes a book, better he didn't. The central figure and the axis on which it rotates is the investigator A. Take away A, and B sinks into obscurity. There are, however, a few things about alcohol of which notice can with propriety be taken here, as they throw light on part of its physiological action, and are consequently of importance when we come to speak of alcohol in its relation to the human body in health and disease.

Alcohol is a generic term and is used to denote a number of substances resulting from the displacement of an atom of hydrogen from the saturated hydrocarbon compound CH_4 by an atomic equivalent of another elementary substance. Those alcohols are known as the marsh-gas series and are always found to be some multiple of the carbon radical CH_2 with the saturated hydrocarbon compound CH_4.

The oldest of these compounds, and the one best known, is the hydrated oxide of ethyl, which is alcohol. These alcohol substances differ widely in physical properties; some are gases, some fluids and others solids at ordinary temperature. Carbolic acid is an alcohol, so is glycerin, so are fats (cetyl alcohol).

The word alcohol is objectionable to the writer because he thinks it is misleading, as it might be supposed to be the beverage that we, or some of us, occasionally drink for health or companionship, but since it is in use by others to designate a particular product and to mean a definite thing, he, to avoid misunderstanding, will also adopt it. It is as consistent to say that the spring of your watch is pig iron as that the beverage that so few of you gentlemen drink is alcohol.

There is more alcohol in a cheap whiskey than in a dear one; just as there is more pig iron in a poor watch-spring than in a good one. Alcohol can be extracted from old hats or old shoes (but it would hardly pay). Anything possessing a saccharine or starchy substance will yield up some form of alcohol in presence of a ferment and un-

[1] Read at the 16th Annual Meeting of The New York State Medical Association, held October 24, 1899.

der favorable conditions. Now, it is as fair to say that we are eating old shoes as that we are drinking alcohol when some kind friend invites us to his social board to sip with him his Prince Maternish or his rare old St. Julian. The old shoes passed through a transformation to become alcohol, so did the alcohol suffer a change to reach the perfection of St. Julian.

The hydrocarbon in the old shoes was converted into alcohol by a process of oxidation; the process continued in the alcohol was a higher oxidation, which resulted in ethereal compounds, which now replace it in the product. Alcohol is said to be absolute when deprived of the water with which it is mixed; it loves this water so much that it is necessary to place decoys in its immediate vicinity to coax it away. (These decoys are called higher affinities.) It is then said to be absolute and anhydrous. The lighter the alcohol is, the more pure, and the higher it is prized in the arts and manufactures, but the more dangerous as a drink and the more useless as a popular beverage. For this reason it is not used at all, but put away with the water with which it is mixed by distillation for some time, the longer the better.

Several alcohols are found together in a single fermentation, and during the process of a distillation the one which evaporates or vaporizes first is the alcohol we recognize and adopt; it is known as ethyl alcohol. Now, another alcohol is heavy and does not evaporate so easily because it contains four times more carbon than the other; this is known as amyl alcohol. In order to have good whiskey it is absolutely necessary that this latter alcohol be mixed in a certain small proportion with the other, as it is so rich in carbon. When this carbon is burned out by slow combustion (and no sooner) the whiskey is fit for use; it takes from ten to twenty years to do this, and even after that the oxidizing process is still going on and new elements evolved by the metamorphosis of old ones, namely, ethereal compounds and gases so valuable a trait in wines and whiskies. They are now called old vintages. New whiskey is not fit for use because it contains raw hydrocarbons in the shape of oils and gases. One of these oils is amyl alcohol, and it is known as fusil oil. It is a powerful intoxicant and very poisonous, but the principal ingredient of the cheap whiskies to be found in grog-shops and dives. At present the manufacturers and distillers are trying very hard to neutralize the effect of the amyl alcohol in their new whiskies by various devices, such as adding glycerin, which, as we have said, is itself an alcohol, but away up in the series, to give smoothness and body, and olefiant gas, which is also an alcohol, to give flavor; but at best these are clumsy devices, and their efforts have met with poor success, as it is almost impossible to counterfeit synthetically an organic compound.

Leave the fusel oil in new whiskey and it is a poison; take it out and the whiskey loses its fire—its spirit, as it were. As the ethereal oils and gases formed by the substitution of alcohol radicals for hydrogen in the acetic and other oxid compounds of the hydrocarbon group are the life of old wines, so the fusel oil and other organic ingredients are the soul of new whiskey. The only way to remedy the evil is, don't sell new whiskey, as it is not fit for consumption, because it is not ripe, and to drink it is like eating green apples.

The good quality of whiskies and wines is developed by the presence of fusel oil and other impurities always to be found in fermented liquors made from cereal and vinous products. It is the oxidation of these substances which calls the alcohols into existence and favors the new combinations which are continually occurring during the slow fermenting process called ripening. As the alcohols themselves resulted from the presence of a ferment with saccharine substances in solution under the influence of heat, so the aldehydes and haloid ethers cannot be evolved save by the destruction of fusel oil.

The presence of amyl alcohol, then, is always essential for good whiskies, but in order to make fine whiskies the conditions must be favorable, and these conditions are rest and exclusion from light, until all the carbon compounds are burned out and transformed into new substances by their own decomposition. If bob veal, which is the meat of a young calf, is exposed for sale, such exposure constitutes a crime and the offender is punished for breaking the law. Why is it accounted a crime? Because very young veal is not fit for human food. The very same rule should apply to the exposure for sale of very young whiskey. Like the veal, it will be fit for consumption by and by, when it grows older—age is the factor in both cases. It may here be stated without the likelihood of contradiction that if whiskies were properly ripened before being exposed for sale in distilleries and saloons, two-thirds of the crimes and four-fifths of the insanity charged to the account of alcohol would disappear from the indictment, so bulky and terrible, that stands against it on the statute books of society. It is the quality of the alcoholic product, not its quantity, that should be considered, and, if the quality is right, the quantity will regulate itself. [The author here kindly and respectfully directs the attention of this august assemblage, which he has the honor of addressing to-day, to this fact, and requests that it gives it the thought a subject of such importance deserves, being, as it is, a matter affecting a large part of the community, and from whom we derive most of our livelihood.]

Alcohol as a General Stimulant and Heart Tonic.—The question whether alcohol is a food has for a long time been discussed *pro* and *con* by writers on materia medica and therapeutics and by the expositors of social economics, but until recently no definite answer has been given, as most of the writers started out to prove that their side of the question was of necessity the only correct one. This was conspicuously the

case with so-called temperance doctors and prohibitionists; for this reason their investigations had no scientific value, and consequently were worthless. They denied with vigor that alcohol had any food qualities, later they further denied that it had any stimulating properties other than that which it excited as an irritant. It is hardly necessary to say that this latter assertion is not worth refuting, for, in order to have produced the pathological phenomena so well described by themselves and admitted by all writers, it must first have excited and aroused into activity the stomach and circulation. This an irritant cannot do. Alcohol may after its local effect continue its action as a depressant and narcotic.

Standard medical writers, however, have always taken the position that alcohol stands first in the select class of substances that may be rightly admitted to be general stimulants and heart tonics. They also go a step further and assert that it serves as a food in certain states of the body in health and nearly always when the body suffers from disease, and for that reason is a useful adjunct to the repertoire of the physician in his daily professional rounds.

The human body is largely sustained by organic compounds, chief among which are the hydrocarbons. These hydrocarbons are known to yield up alcohol under conditions that can be presented in the chemical laboratory of the body. There is little doubt but that all hydrocarbons ultimately offer their nutrition to the tissues, and distribute their heat to the body in the form of some alcohol, with the formula of which we are not acquainted, and never may be. Some experiments recently made with the object of determining definitely whether alcohol is a food have been conducted along lines mapped out by the ablest writers on therapeutics, and drawn from careful observation under a variety of conditions, clinical and empirical. These writers felt sure of certain facts, *viz.*, that alcohol under definite conditions acted as a food, in fact, that it was a food; but scientifically they were not able to establish this conclusion, for science must always be the standard by which to measure every form of investigation and the key to unravel all phenomena whether of mind or matter.

Through the experiments conducted by Professor Atwater it has been proved that alcohol is a food and that it yields up its heat and force exactly as does a pound of bread or a bowl of soup; and that it best does this under circumstances that render it impossible for either of the others to have any value as a food supply.

Alcohol differs from all substances in one essential particular in that it presents allotropic features with varying conditions of the body, acting as a stimulant, a tonic, a food, an irritant, or a poison. When we wish to form new compounds from the elements of others there is a favorable moment, known as the nascent condition, when the elements are dissolved and at liberty to choose new affinities.

The human body, no doubt, presents such a condition to the oxidized hydrocarbon compound, alcohol, at a time of fatigue, disease or hunger, in the order in which they are written. At such time the affinities are feeble and present the favored moment for the transformation of the alcohol into heat and force. Under ordinary conditions, however, the natural stimuli of the body are food and oxygen; they are expressed in the phenomena of vital activity, the measure of which is volition and sensation. In the healthy human body, when not suffering from exhaustion or shock, food, rest and oxygen supply the most favorable conditions for its maintenance and growth.

If the average physician could look at alcohol in the abstract, view it as he would a pile of lumber or a heap of sand, a thing capable of being applied to a certain purpose or under changed conditions to a number of purposes, the objection to its use, when it could be useful, would quickly disappear. Is it logic for one to object to sand being used in the building of the house because a friend, while excavating, without taking the proper precautions, was overwhelmed; or to be opposed to the use of wood in interior decorations because a careless man was killed by a falling timber? Such a course of procedure would not be rational ground for objection.

Electricity has torn the earth asunder, rent the air and made the heavens awful with its lurid flame; it has ravaged the face of nature and created havoc and desolation in every land and clime on the habitable globe, destroying many thousands of lives every year, yet on that account nobody objects to it as a fuel nor as a light to illuminate his dwelling. While we recognize the danger of electricity, we are prepared to utilize its useful and economic side and adopt it as a valuable household auxiliary. To condemn and repudiate it because it kills its thousands every year is like denouncing alcohol because it destroys those that abuse it. Electricity in the kitchen, in the parlor, the counting-room and the physician's office produces comfort and lightens life's burden. Alcohol in the banquet-hall, in the beer-garden and at the domestic hearth makes thousands merry for every ten it renders miserable and for every one it destroys. The man is justified, who, feeling insecure, puts up a lightning-rod to protect his house, and the man who cannot handle alcohol in a rational manner is equally justified in taking a pledge and attaching himself to a temperance society; but he has no right to denounce alcohol because of his own weakness any more than he should a lamp-post which he was unfortunate enough to run foul of when under the influence of his potation. The lamp-post, serving a useful purpose, had a right to be where it was. The alcohol, too, was prepared to serve a useful purpose, but the man who imbibed it freely robbed it of the opportunity to put its purpose into practice.

To recognize the properties of alcohol in the abstract, and to know that it has other purposes than to make men intoxicated and disorderly,

is the duty of every physician. He must see alcohol from its useful, and health-giving point of view, and not from that of the clergyman or the temperance orator, the former of whom may know nothing of alcohol—the latter, too much. These men, undoubtedly, are honest in motive, and are justified in their harangues and philippics against alcohol, because they are looking on its moral side and entirely incapable of seeing any other, although there are several and all in plain sight of those who are not carried away by the excitement and prejudice aroused by the men who are looking on but a single side.

It is difficult to contemplate without pity the position of these poor men—the clergyman and temperance lecturer, with the few friends they have gathered round them—conscripts from the medical profession and others assembled in the moral blockhouse, unconscious that no war exists, but who are fighting for principles that have been conceded and deaf to the bugle blast of common sense which demands reconciliation and reunion as a common benefit to all.

The Physiology of Alcohol.—An important side of alcohol, and one that should have interest for every physician, is the physiological one. As a physician, this side should interest him most, as it has especial value in the time in life when the fire on the human hearth is burning low and the powers of life almost exhausted. Another, the pathological side, will be touched on when we come to speak of alcohol in disease.

When the human body is free from pain and every organ in the vital mechanism performing its function after its order, the body may then be said to be in perfect health and its measure of vitality might be rated at a hundred. There are many fluctuations in this human barometer and it may sometimes fall very low in case of great and prolonged muscular and mental exertion, actually down to fifteen, or even ten, the body being in perfect health; if it were otherwise, as is the case of disease, no such low-water mark could be reached, as death would speedily ensue. The body in this enervated state is suffering from the effects of extreme exhaustion and must not be confounded with the collapse occurring at the critical stage of a disease.

The body suffering from extreme exhaustion is in the position of a bank which has paid out the last dollar of its working capital to stop a run and avert a panic. It has securities in the shape of potential energy locked in the muscles but they cannot be got at to be turned to immediate account. Rest and sleep would solve the problem and liquidate the human bank, but this is now out of the question, for aid must be immediate. What can give this aid? Can anything liberate and transform the force tied up in this exhausted man's muscles into a working capital of dynamic energy, so that the body may perform its function and he finish his task or journey at once? Anything that will do this will be acceptable to him, and the thing which will do it quickest will be most acceptable. What is that thing? Most undoubtedly alcohol. In this dire emergency, alcohol turns its physiological side (like a mother her breast to her hungry child) which here has two offices, the one to develop energy in exhausted tissues, by the heat it yields up through its own oxidation; the other, by its stimulation, to equalize the blood current which is irregular and deficient at the periphery of the circulation.

The man who walked yesterday twenty miles in five hours, and, who, while not yet at the end of his journey, grew weary and exhausted and unable to proceed further; that this journey should be completed in a given time means all to him; four miles have yet to be covered and he is exhausted. What can he do to enable him to complete his journey? He is a temperance orator, besides being a lecturer on therapeutics in the college of a New England town, but, for the time being, has adopted the vocation of a pedestrian; he knows all about the use of alcohol, as he does the virtue of drugs, but none of his drugs have helped him now; beef-tea and coffee in turn he has tried; they have failed, although so potent in the early hours of his journey, for now they have irritated and upset his stomach, making it as weak as his legs on which he can hardly stand and utterly unable to digest any substance, fluid or solid. This is a moment of anxiety for that therapeutic pedestrian, as the completion of his journey in a given time means a world to him. His stomach is wholly useless and unfit to perform any function (in fact it pains him), being as unable to digest as an elephant is to fly. Its muscular coat is paralyzed and its mucous layer irritated and lying collapsed on the viscera like a torn balloon on the turf. He does not believe in whiskey and says so in his lectures to the students at the college, declaring it to be an irritant under all circumstances, a depressant and a poison, but, at the urgent solicitation of his trainer, who is a professor of physical culture at the same college in which he has the honor to fill the chair of therapeutics, he is persuaded to take four ounces of old whiskey, which the trainer has handy in a flask. After thus imbibing, he finishes the remaining four miles of his journey with an ease and grace that appear to be born of magic.

A man, loitering in a saloon the other day, drank four ounces of whiskey, after which he became so intoxicated that it became necessary to remove him to a hospital, where he died the same evening. Another man, a physician, after successfully terminating a difficult labor case, drank eight ounces of brandy, after previously administering ten ounces to his patient, who was exhausted from postpartum hemorrhage; its timely administration saved the woman's life; the only effect it had on him was to readjust his disturbed circulation, equalize the nervous current in life's dynamo that was rapidly burning out the switchboard of his vitality, and restore the mental coordination lost by his great exertion. He was not intoxicated, neither was his patient, by their large potations, although twelve hours afterward, when recuperated from their fatigue, the same

quantities would be followed by unconsciousness and probably death, when a beautiful illustration of the pathology of acute alcoholism could be exhibited on their cadavers. The only effect on the brain was a slight stimulation of the cells, producing a pleasant exhilaration. The alcohol in both cases was immediately burned up like a handful of shavings in a blast furnace, to fill a physiological demand by yielding up its heat to warm the body and by destructive metamorphosis liberating energy by its vitalizing power from enfeebled and paralyzed muscles. It thus enabled the heart to perform its function and the man to continue his existence.

(*To be continued.*)

CLINICAL MEMORANDA.

THE THRUSH-FUNGUS AS A CAUSE OF GASTRITIS.

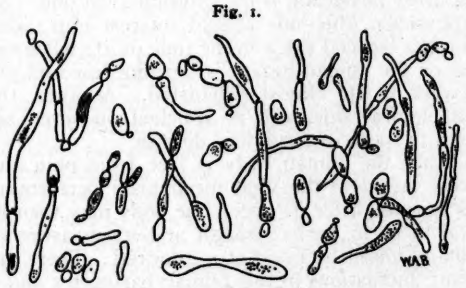
BY W. A. BASTEDO, Ph. G., M.D.,
OF NEW YORK.

IT is well known that the thrush-fungus (saccharomyces albicans, Van Tieghem; oidium albicans, Robin) is responsible for many cases of sore mouth, and has been reported as causing various inflammations in other portions of the alimentary tract. From Europe we hear of a few cases of acute gastritis due to this fungus, yet in this country a "thrush" gastritis is so rare as to be a medical curiosity. One of these cases was admitted to the service of Dr. A. A. Davis, at St. Luke's Hospital, New York, last summer and gave the following clinical history:

Miss F., aged twenty-six years; she has always lived in New York; occupation, light housework. She gives no previous history of any sore mouth, or stomach or intestinal trouble; has been very healthy up to her present illness, has never used alcoholic drinks, but for several years has consumed large quantities of coffee. On August 5, 1899, the patient was apparently in her usual health in the morning, but in the afternoon had a severe chill, which was followed by persistent vomiting. She had a severe frontal headache, which continued for two days. Abdominal pain was absent until one and a half days after the onset of the vomiting, when she felt a sudden sharp pain just below the ensiform cartilage. This pain and the vomiting continued severe until the time of admission to the hospital, ten days later. Since vomiting began she has been unable to retain anything in her stomach, even a small amount of water being rejected within five or ten minutes after swallowing. At no time did she vomit blood of coffee-ground material. The lips and tongue have been dry and sore, her bowels constipated, and her urine scanty and dark-colored. She has the sensation of a "distinct lump" below the ensiform tartilage. Occasionally she belches gas, but without any relief from the pain.

A physical examination eleven days after the onset of the symptoms shows a small anemic, emaciated patient. Her tongue is red, dry and cracked. The lips are dry and with slight herpes in the left angle of the mouth; pupils are normal; lungs and heart negative; radial pulse regular, rapid, with some tension; artery moderately thickened. The liver is felt just below the free border of the ribs; the edge is soft, but not tender. The spleen is not enlarged. The lower border of the stomach percusses on a level with the umbilicus; there is marked tenderness and resistance in the central epigastric region, but no mass can be detected. Genito-urinary organs negative. Temperature, 99.4° F.; pulse 128, respiration 28. The patient was much prostrated and vomited twice while being examined. The vomitus consisted of clear fluid containing a little mucus and many grayish particles which floated on the surface and looked much like an ordinary mould. A chemical examination of the fluid showed no free hydrochloric acid, no bile, no maltose, traces of organic acids. Under the microscope the grayish masses were seen to consist of a few bacteria and epithelial cells, probably a few yeast cells, and a large amount of the saccharomyces albicans or "thrush-fungus." At this time the patient's leucocytes were 12,600 per cmm.; her urine dark-colored, of specific gravity 1022, and containing a slight trace of albumin and very few hyaline and granular casts.

Fig. 1.



The Thrush-fungus (saccharomyces albicans, Van Tieghem).

She was given a nutrient enema consisting of the yolk of one egg, peptonized milk ℥vi, beef peptonoids ℥ii, whiskey ℥i, with a pinch of salt. This was at once expelled. Lavage was resorted to and a large amount of the fungus removed. Milk with cerium oxalate and sodium bicarbonate was given through the tube, and was vomited in curd a few minutes later. Then a dose of codeine, one-eighth of a grain, and chloroform water, one dram, was given and followed in five minutes by milk and lime-water, one ounce of each. This was retained and the procedure was repeated every two hours with success. The next morning, as she was somewhat better, an Ewald-Boas test-breakfast, consisting of a roll and 360 c.c. of weak tea was given, and it was retained, although there was some nausea. It was evacuated one hour later. A few cubic centimeters of thick fluid was obtained, containing much undigested roll, some mucus, and much of the fungus. There

was no free HCl, but a small amount of combined HCl, traces of lactic acid and of the acids of fermentation; total acidity 20. There was no bile, starch-digestion was moderate; the rennet-ferment was abundant. The mixture of codeine and chloroform was omitted on the second day and two ounces of milk with sodium bicarbonate given every hour. This was retained. On the fourth day, the morning lavage showed no fungus, and the patient began to have an appetite. Broths and a scraped-beef sandwich were taken with relish and with no discomfort. Five days later the patient was walking about and eating regular meals.

The size of the liver remained the same throughout. On the day after admission menstruation began and was normal in amount and duration. A careful examination and cultures taken failed to reveal any infection of the mouth and throat. As there was a large quantity of the fungus in the stomach, and as no other etiological factor could be ascertained, thrush would seem to be the probable cause in this case.

In the literature there is no satisfactory statement as to whether the fungus grows free in the stomach, or is attached to the walls, or penetrates the stomach-cells. It is also not known whether the fungus develops very rapidly, producing gastritis in a very short time, or whether its growth is slow, and it gradually accumulates until the stomach is no longer able to tolerate it. If the latter is the case we would expect some prodromal symptoms before the acute onset. The specimens obtained by us indicate that the fungus was undergoing rapid growth. Morphologically the globular and globulo-filamentous forms predominated and these are the forms obtained in the laboratory by rapid growth in favorable media. The filamentous forms tend to develop in media of complex chemical nature; or, where the growth of the fungus is retarded, as in the presence of antiseptics.

A CASE OF TRANSVERSE PRESENTATION; DOUBLE UTERUS.

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As I deem the case I am about to report one of interest to practitioners generally and worthy of report for statistical purposes, I submit the following history: On January 1, 1900, at 9 P.M., I was called three miles in the country to Mrs. D., white, aged forty years; multipara; ninth pregnancy. She had been in labor thirty-six hours. On examination I found the left arm of fetus protruding from the vulva, dorsoposterior position, with head to the left side and the shoulder completely wedged. All movements of the fetus had ceased, and labor pains were infrequent and very feeble. The woman had been in the hands of a so-called midwife, who informed me that the condition which I found existing on my arrival had obtained since 9 A.M., the woman having had rapid and violent pains from that hour until shortly before my arrival, at 10 P.M. A glance was sufficient to show that the woman was in a state of collapse. Examination revealed no radial or temporal pulse and the second sound of the heart was not to be recognized. The abdomen was excessively tympanitic. Hypodermics of digitalis and ether and later of nitroglycerin failed, after a lapse of twenty minutes, to induce the slightest response from the heart, so without the use of anesthetics I proceeded to perform podalic version and deliver with some difficulty. One knee was reached, but not without the introduction of a portion of the hand into the uterus. By careful and continued manipulation a foot was soon brought down. This being accomplished delivery was easily effected. Fearing the occurrence of post-partem hemorrhage, a full dose of ergotole with one-fourth grain of morphine was given, after version and before delivery was completed. As it was evident that the fetus had been dead several days no effort was made toward complete delivery until uterine contractions, which were very feeble at the time of delivering the lower extremities, were of the strength and regularity approaching the normal. The third stage of labor was disappointing, inasmuch as every effort of nature, as well as those of my own, failed to expel the placenta. This was finally accomplished, but not without reluctantly, although of necessity, passing the hand within the uterine cavity. Throughout the whole process of delivery the patient's condition manifested no appreciable change. Shortly after delivery her general condition seemed improved, but at no time for three and a half days was there a return of the pulse. After this, until her death, which occurred on the morning of the tenth day, her general condition improved slightly, and her pulse, although recognizable and regular, was very weak. For three days following delivery there was great tympanites, but little or no tenderness over the abdomen, which was tolerant of considerable pressure save over a small area of about two square inches directly above the symphysis, nor was the tenderness very marked even here. Tympanites entirely disappeared by the end of the fifth day. The patient's temperature on the second day reached 100° F., but at no time before or after was it above 99° F. There was no hemorrhage at the time of delivery, or after. I was informed by attendants that there was little or none before my arrival. The placenta was already detached when efforts were made to remove it and had evidently been so some time prior to delivery. With the placenta two large clots were delivered. Lochial discharge was scant for forty-eight hours, but later was normal in character and amount. The urine had to be drawn with the catheter fourteen hours after delivery, but after that was passed by the patient at regular intervals, and, as nearly as could be learned, was normal in quantity. In appearance the urine was normal, save perhaps slightly high colored. It contained no albumin. The bowels were constipated for two days, but responded kindly to a

dose of oil, which was followed by normal, daily evacuations. From the time of delivery to the time of death the patient complained of extreme weakness, although constantly insisting on the necessity of sitting up, and taking solid food, both of which privileges were denied her. When I saw her last, twelve hours before her death, she was apparently doing well, although still on heart tonics, stimulants, and liquid diet, and complaining of "awful weakness." She died rather unexpectedly, at 4 A.M., on the tenth day, her attendants reporting that she had been extremely drowsy from 6 P.M., and at the last had "slept soundly and never waked up," her end being quiet and painless, and her mind, during waking hours, perfectly clear to the last. For two days prior to her death she passed her urine and feces in bed, apparently involuntarily, although at the time she would converse rationally and state to her attendants what had happened. The patient belonged to the poorest of the poor class, and her surroundings were such that worse are scarcely ever seen. The proper medicines were provided for her, however, and nourishment. Her death I can only attribute to exhaustion, from which she never rallied, although she survived her labor for a fraction over nine days. After her death I was informed that at about 5 P.M. on the day of her death she had, at her earnest solicitation, been allowed to sit up in a chair for an hour or more by her attendant. She had experienced no difficulty in any of her eight previous labors. During the entire summer and up to the time of her confinement, she informed me, she had been having malarial paroxysms at regular intervals.

The double uterus in this case is of interest. After passing my hand into the vagina in my first examination, I noticed that the examining finger, following as closely as possible, the line of the arm to the point of the shoulder, lost contact with the arm. Pausing a moment to ascertain the cause, I found between it and the arm tissue which was recognizable as uterine. Thinking that I had met with a cervical laceration and that a flap on one side of the rent had insinuated itself between my finger and the arm, I tried to again make digital contact with the arm without withdrawing my finger. This I could not accomplish, and in a moment I discovered that my finger was within a circular aperture separate and distinct from the orifice through which the fetal arm was protruding. I then quickly, but thoroughly explored the opening as high up as it was possible to reach with my finger, found that it terminated in a cavity something more than a finger's length in depth, comparatively smooth internally, and without any opening to be detected, save at its vaginal extremity. My finger was freely movable in it and I could, through its inner or right lateral wall, make out distinctly the outlines of the fetal head, while its left or outer wall was, to the touch, very much thicker and more resisting. I now recognized that I was dealing with a case of double uterus, and determined if possible later on to further investigate the matter. After turning the fetus, which was in the right uterus, and while still only the lower extremities were without the os, I passed my finger again into the opening to the left. The uterus was still comparatively inert, and I was able to pass my finger quite two-thirds of its length into the cavity, at the same time keeping my left hand on the woman's abdomen awaiting the next appreciable contraction. After waiting thus for probably a minute there was quite a strong contraction and simultaneously as the impulse was conveyed to my hand on the abdomen, the tissues surrounding my index finger in the vagina contracted forcibly around it. This dispelled all doubts that might have existed concerning the nature of the second and smaller cavity. When delivery of the fetus had been accomplished, and I found it necessary to pass my hand into the uterus to extract the placenta, I took occasion to note carefully anything out of the normal in such cases which might present itself to the touch. During this manipulation I found that the two uterine openings were distinct and separate at the os externum and that at this time the finger could not be inserted in the left (unimpregnated) uterus for more than an estimated half-inch and that the margin of each external os was complete in itself save the partition common to both. The partition tissue separating them was considerably less in thickness and softer in consistency than the opposite (left) and unimpregnated side, and slightly thicker than the impregnated (right) side of the uterus. With the hand in the impregnated uterus I noted that the right partition wall of the cavity was thick and resisting and seemed to bulge somewhat into the cavity, while the balance throughout seemed to be much thinner than the normal. This examination, although very hasty, was carefully made with the aid of the left hand on the abdomen while the right was within the uterus.

MEDICAL PROGRESS.

Cold Bathing in the Treatment of Typhoid.—J. C. Wilson and J. L. Salinger (*Phila. Med. Jour.*, March 3, 1900) give complete and full statistics of 1904 cases of typhoid treated by them by the Brand method of cold bathing or by modifications of that method as gradually adopted. The mortality of the 1904 cases was 7.5 per cent. The writers make the following affirmations, based on the full statistics of these cases: (1) That the treatment by systematic cold bathing does not avert or diminish the frequency of hemorrhage. (2) That the frequency of the occurrence of perforation is diminished. (3) That it diminishes the danger of complications, especially those relating to the circulatory and respiratory tracts. (4) That it is apparently attended by a somewhat increased frequency of relapse, although general statistics in regard to relapses are entirely unsatisfactory. If relapses are more common in bathed cases it is probably due to the fact that owing to

the reduction in mortality a large number of cases which under other forms of treatment would have died in the primary attack survive to suffer the relapse. (5) That the treatment is attended by the occurrence of albuminuria in a large percentage of cases. This albuminuria shows itself in two forms: (*a*) As a faint reaction without casts or other indications of renal disease; (*b*) cases in which albumen is present in considerable amounts with blood-corpuscles and casts. (6) That it has no influence in increasing the danger of otitis media. The writers have gradually modified the original method of Brand, as follows: (1) Purgatives are administered early in the attack. Calomel is used for this purpose in fractional or large doses and is sometimes followed by a saline. Purgatives are never given to cases after the tenth day of the attack. (2) Cold compresses or ice-bags are applied to the abdomen in all cases of abdominal tenderness or pain, and in hemorrhage. Turpentine stupes are also applied for tympanitic distention of the abdomen. (3) Evidences of hemorrhage, perforation or peritoneal infection contraindicate systematic cold bathing. Cold bathing is instituted in all suitable cases, but drugs are used as each case requires. Only about ten per cent. of the cases require any medication whatever, except the early purgatives, throughout the disease. (4) During the whole course of the attack whenever, three hours after a bath, the temperature in the axillar reaches 101.4° F. the bath is repeated. (5) Baths are continued after the temperature has ceased to rise to 101.4° F., during defervescence once or twice a day and for a short time afterward once every one or two days. (6) Instead of having them lifted from the bed into a tub beside the bed, the writers have encouraged the patients to help themselves. Grave cases were lifted into the tub, but as their condition improved, and in other cases, they were encouraged to help themselves and were soon able to enter the tub with but little assistance. Then a stationary tub was placed at the end of the ward and the patients, with assistance, walked every three hours to the bath and back to the bed. The most distant bed was six meters from the tub. The severest cases were placed nearest the tub and were carried to the tub until able to walk. This procedure was found to exert a very favorable influence upon the course and symptoms of the attack. In over three years the writers have had 776 cases bathed in this manner, with a mortality of 7.8 per cent. The regular and slight exercise of the muscles every third hour, and the stimulation to the system tends to relieve the passive congestion of the viscera and thus minimizes certain of the pathologic processes. (7) To be of benefit the cold bath must be given early and systematically. The favorable results of cold bathing are due to the rhythmic repetition of the stimulation of physiologic processes and of the modifications of pathologic processes brought about by a succession of baths begun early in the course of the disease.

Intestinal Sand.—R. S. Thomson and A. R. Ferguson (*Jour. Pathology and Bacteriology*, Feb., 1900) complete a preliminary communication made before the Clinical Society of Glasgow on an unusual case of intestinal sand occurring in a woman of thirty. She had suffered at intervals of several years from symptoms of catarrh and moderate dilatation of the stomach, associated at times with signs of decided neurosis. Decided constipation was the only condition that drew attention to the intestines. The patient was kept at rest and fed on small quantities of milk, with occasionally fish and toast. Lime-water was also given with the milk. While the diet was confined to milk and lime-water it was observed that considerable quantities of sandy matter were passed at each defecation. This same kind of sandy material had been passed for several months prior to the time of reporting. The sandy matter was heavy, sinking rapidly to the bottom of the vessel, brownish-yellow in color and resembled uric acid quite markedly, both macroscopically and microscopically. The crystals were, however, quite irregular in form and the tests for uric acid were all negative. The sand was not of vegetable origin as a microscopical examination showed. Chemical analysis revealed 25 per cent. organic matter and 75 per cent. inorganic matter, of which there were 11 per cent. calcium carbonate, 87 per cent. tri-calcic phosphate and 1 per cent. silica. The sand was unchanged by hot or cold water, alcohol, ether, chloroform or any of the usual solvents, but it was readily dissolved in weak acids. The coloring pigment was of interest in that while closely related to many of the well-known pigments of the body, yet it was distinct and the authors believe that it represents a substance intermediate between the ordinary bile pigments and their ultimate product, stercobilin. The ready solubility of the intestinal sand in dilute acids suggests that it was formed, neither in the upper part of the small intestine, where practically unchanged bile pigments are present, nor in any part of the colon, in which stercobilin is the prevailing pigment, but in the ileum, where the intestinal contents are most liable to be alkaline in reaction.

New Blood Parasite.—It is not often that in a journal of high scientific repute one finds details of new discoveries which bear the ear-mark of bad observation. Von Tunzelmann (*Jour. of Pathology and Bacteriology*, Feb., 1900) describes some remarkable parasites found in the blood of Chinese suffering from a disease which he says is common to that country. The parasite is classed as one of the molds, with branching hyphæ and numerous spores. The hyphæ are described as being ½ to ¾ of an inch in length, as they emerge from the capillaries, the illustrations apparently making them out to be much wider than the ordinary capillaries of the finger. The precise technic is not given, but it may be suspected that the blood was examined in a contaminated solution of some sort, either the ordi-

nary salt solution or the staining fluids were contaminated with one of the common molds. The author says that every one has them. Even the gravy of hot roast-beef abounds with them. If editors of scientific periodicals cannot shield the non-technical student where will such pseudo-science, such as this appears to be, bring us?

Apomorphine as an Hypnotic.—Authorities on materia medica usually state that apomorphine has no hypnotic or narcotic action. Considerable experience with the use of this drug has induced C. J. Douglas (*N. Y. Med. Jour.*, March 17, 1900) to believe that there is no remedy so near an approach to an infallible hypnotic as apomorphine, and he has found it equally useful in all forms of insomnia regardless of the cause. It should be given in a single dose of about one-thirtieth of a grain, injected subcutaneously. The object is to give a dose that, on the one hand, is large enough to produce sleep, and, on the other is so small that nausea and vomiting are avoided. Hence, individual susceptibility must be considered. It should be given when the patient is in bed, for its effect is very rapid and the patient will usually fall into a restful sleep within five to twenty-five minutes. If no results are observed within one-half hour the dose is too small. The effect persists for from one to two hours, but in many cases of insomnia the patient will sleep all night. In active delirium it acts very well and a slight nausea may increase the effect in those cases. There is no possibility of a "drug habit," for it becomes a vigorous emetic if the dose is increased.

Therapeutics of Heart Disease.—The indications for treatment in the various acute and chronic conditions of the heart are reviewed in a valuable article by W. H. Thomson (*Med. Record*, March 17, 1900). The routine fashion of treating nearly all cardiac troubles with digitalis is thoroughly deprecated. The acute disorders he divides into those of an inflammatory character and those due to a parenchymatous myocardial degeneration, secondary to diphtheria, the acute exanthemata, or sometimes appearing in cases of rheumatism. Overstrain may produce an acute condition with its symptoms and indications for treatment differing from the above, and this may occur not only in healthy hearts but also from injudicious exertion in convalescents from typhoid. In the acute inflammatory states the condition is one of great excitement of the viscus, and rest is, therefore, one of the most imperative indications. When the heart is beginning to fail in acute cardiac inflammations, as the pulse, dyspnea, and other signs develop, it is from an overfatigue which in the majority of cases will only be aggravated by administering heart stimulants. With febrile temperature, cardiac pain, hurried respirations and rising pulse with distended rhythm, the treatment should be leeches to the pericardium, followed by constant poultices of flaxseed-meal with extract of hamamelis and laudanum poured on just before the cataplasm is applied, and then covered with oil-silk continuously, day and night. He believes that no vascular sedative is so potent as blood-letting which acts reflexly through the surface nerve impression. The poultices act similarly, since there is a most intimate vasomotor association between the nerves which control the blood-vessels of the viscera and of the corresponding skin areas above them. The drug which is the ideal heart sedative in all such conditions is aconite, since it promptly alleviates cardiac pain and shows the heart beats, which is the important indication. A strong laboring heart impulse and a rapid pulse demand aconite rather than digitalis.

Where high tension exists veratum viride is much better than aconite. In cases of acute parenchymatous degeneration secondary to diphtheria or the exanthemata, surface pallor is the characteristic hue and the pulse is rapid, small and irregular. Digitalis is here a most mischievous agent. Its action is to diminish the size of the heart's cavities and is of great service when the heart walls are overdilated, but the important fact about digitalis is that it must have a normal muscle to act upon, and is, therefore, a harmful drug in these cases. Alcohol, however, should be pushed to its unmost limits with strychnine, caffeine and hypodermic injection of camphor, gr. viii; to sterilized oil, ♏xx. These remedies are also indicated in acute carditis when the heart begins to fail, and should be substituted for aconite when the heart is beating feebly instead of strongly and when the extremities become cold rather than hot. Many of the chronic sequelæ of acute endocarditis could be obviated by a prolonged convalescence, which is strongly urged, in order that the progressive involvement of the valves may be arrested as soon as possible. Prolonged rest and aconite furnish the greatest safeguard. Considerable stress is laid on myocardial degeneration, which the author believes to be one of the commonest and most efficient of all causes of failure of compensation in the heart disease of patients after middle life. It precedes valvular lesions in a large proportion of cases. In the treatment of chronic heart disease, all organs of the body which have to do with nutrition must be called on to do their share. Digitalis is here often of inestimable value, especially in cases of dilatation subsequent to hypertrophy, but it is important to realize that mercurial laxatives are most effective adjuvants to this drug. Half-ounce doses of the infusion are preferred, for which is substituted in a few days thirty drops of a mixture of equal parts of the tinctures of digitalis, strophanthus and nux vomica. When digitalis is not well borne, a very good pill may be given, composed of spartein sulphate, gr. i; powdered squills, gr. ss; caffeine citrate, gr. iss, and strychnine, gr. $^1/_{30}$. Permanent improvement, however, is to come from other agents and measures which restore nutrition rather than stimulate function. Too great reliance must not be placed on drugs. Fresh air and systematized exercise are extremely important. Iron, mercury, the

iodides, and arsenic are oftentimes of great service as systemic tonics. Ortel's mountain-climbing, massage and Schott's saline and carbonic-acid baths are excellent in principle and very effective when adapted to certain cases.

Whooping-Cough.—A number of statistics have been deducted by W. A. Dunckel (*Med. Record*, March 17, 1900) from the two hundred and sixty-one cases of whooping-cough which appeared at the New York Dispensary from 1894 to 1900. The records of these cases are, of course, oftentimes very meager. In point of frequency, sixty per cent. were females; sixty-seven per cent. occurred between the ages of six months and five years. There were but two cases at three months and none later than ten years. Complications were noted in sixty-seven per cent. of cases and were divided into two groups. (1) Those dependent upon the violence and strain of the paroxysms, and (2) those due to lesions associated with the disease. Of the first group there were: Hemoptysis, 6; epistaxis, 2; subconjunctival hemorrhage, 1; umbilical hernia, 2; ulcer beneath the tongue, 2. Of the second group there were: Mild bronchitis, 2; severe bronchitis, 33; bronchopneumonia, 19; tuberculous meningitis, 1; pericarditis, 1; malnutrition and wasting, 8. Four cases terminated fatally, three being due to bronchopneumonia. Relapses were noted in five patients. Emphysematous changes were subsequently observed in only a few patients. It is surprising that tuberculosis is not a more frequent complicating condition. Not one of these cases while under observation had any endocardial complication, nor was it possible to be satisfied that there was any cardiac enlargement. Belladonna was sometimes used to allay the paroxysms, but the most reliance was placed upon a supporting treatment of cod-liver oil and malt preparations.

Influenza and Meteorology.—A few interesting facts are given by J. Ruhemann (*Berl. klin. Woch.*, February 26, 1900) à propos of the epidemics of influenza which have been raging in the German cities this winter. He asserts that the only meteorological factor in these epidemics worthy the name is the sun. This body's antibacterial and germicidal influences are well known especially in their bearing on the infectious diseases. Thus in Berlin, the smallest quantity of sunshine measured by the meteorological bureau since 1893 was registered during the month of January, 1900. For the entire month, the sun shone but 9.8 hours. In 1899, Berlin had 62.3 hours of sunshine during January. During the month of December, 1899, notwithstanding the shortness of the days of this month, the sun shone for 19.0 hours—more than twice as long as during January last. In Magdeburg, a similar state of affairs existed. Since 1882 the least sunshine for January was recorded for this year, when it reached 19.0 hours for the entire month. In 1899 it was as high as 69.0 hours for the same month. In Breslau the sun shone but for 7 hours for the entire month of January. The author further states that the 9.8 hours of sunshine in Berlin occurred before the fifteenth of the month, no sunshine at all brightening the town for the remaining days. It was just in this latter half of the month that the grip epidemic became so severe and far-reaching. In 1889 the last extremely severe epidemic occurred. During that year, in January, there were 23 days in which the sun did not shine at all in Magdeburg and 22 days in Berlin. Ruhemann believes that these facts warrant his conclusion of the dependence of the influenza germ upon the absence of sunlight.

Constitutional Albuminuria.—This name is suggested by F. Martin (*Klin. therap. Woch.*, March 4, 1900) as better expressing the presence of albumin in the urine without nephritis than the older names, cyclic or physiological albuminuria. No doubt the condition is a pathologic one, depending most likely on a congenital weakness of the glomerular epithelium which, from the mere strain of being up and about, allows albumin to pass. The disease may disappear or gradually pass into a true nephritis, but experience is as yet not sufficiently great to determine to what percentage the latter ever takes place. The relation of the disorder to organic renal disease is the same as that of alimentary glycosuria to true diabetes. It is important to be on the lookout for this form of albuminuria, for the condition is by no means rare, and children who easily tire at school, suffer from headaches, perhaps are troubled with heart-weakness, must be regarded with suspicion. It would seem that the best treatment, in addition to avoiding the use of alcohol and other irritants, would be to keep these patients in bed. They do not, however, feel sick enough for this and a prolonged rest only demoralizes. Hygiene measures and careful training are the chief mainstays. Often the abnormality corrects itself, and the author has seen a case go through pregnancy without untoward results.

Opening Pericardial Sac.—C. Ogle and H. Allingham (*Lancet*, March 10, 1900) noticed during an operation for suppurative pericarditis that the heart's action was not interfered with by rubbing off fibrin from its surface, but that it was actually improved. Since these fibrin patches interfere with drainage and tend subsequently to form adhesions, it is important to know that the heart may be handled rather freely without danger. By the ordinary operative route one can not reach the base and posterior aspect of the heart to clean thoroughly, and often the pleura is injured and may be infected. To get at all sides of the heart and to avoid damaging the pleura, they devised the following operation: A three-inch incision is made from the costo-xiphoid angle along the lower border of the left seventh cartilage, which is then exposed by separating the abdominal muscles from it. It is then pulled upward and outward to expose the lower surface of the diaphragm and the cellular inter-

val at the costoxiphoid angle, through which a good-sized opening is made. A mass of fat is exposed in the space between the sternum, diaphragm, and pericardium. This fat is pulled downward with the diaphragm, when the pericardium presents itself, and can be freely opened below and in front, and a finger inserted to explore the entire sac and remove fibrinous masses. The peritoneum may be exposed early in the operation, but is pushed away without damage as in suprapubic cystotomy. The method has the following advantages: No possible damage to pleura; drainage from the most dependent part of the sac, through a large opening not bounded by cartilage or sternum; ease and efficiency in exploring and cleansing the heart. In certain cases with rigid cartilages, it may be necessary to resect a portion of the seventh cartilage.

Terpinol in Hemoptysis.—In the continued bleeding of tuberculosis, F. G. Janowsky (*Klin. therap. Woch.*, Feb. 25, 1900) has found terpinol far superior to the usual remedies. After eight to fifteen doses of 3 drops each, given at short intervals, the hemorrhage in most cases ceased. If no improvement follows after thirty-six hours, the drug had best be discontinued. As compared with turpentine, terpinol easily ranks first. Albuminuria or hematuria never followed. Occasionally a slight burning in the pharynx is complained of, which can easily be prevented by giving the drug in some demulcent.

New Hernia Suture.—L. Freeman (*Annals of Surgery*, March, 1900) describes his hernia suture. When ordinary material and methods are used, a suture, once the wound is infected, must come away before complete recovery can ensue. Even with primary union a late, sluggish inflammation, causing a sinus, often occurs. To avoid these complications Freeman devised the following technic in suturing which will be described in connection with inguinal hernia. Three or four sutures, silk-gut, silver wire, or silk, are used, doubled, with both ends threaded through the eye of the needle. These are passed through Poupart's ligament and then through conjoined tendon as in Bassini's operation. There is now a series of loops along Poupart's ligament through which a rigid silver wire is passed. Along the conjoined tendon project the free ends of the sutures, between which another silver wire is passed and the sutures tied. This makes a series of quilled sutures. The upper ends of the wires are placed high enough to sufficiently close the internal ring, and the lower ends are bent so as to project out of the lower end of the wound. The suture ends are left long and are brought up out of the wound, which is then closed as in Bassini's operation. After ten to fourteen days there is fairly firm union and the wires are withdrawn through the lower end of the wound and the sutures are then easily withdrawn. After union has occurred sutures are of no utility, for if there is no tension they are superfluous, and if there is tension they cut the tissues. The method has the following advantages: It is simple and quickly done; considerable tension is easily overcome; the sutures cannot cut through; a large amount of muscle is closely and evenly applied to Poupart's ligament, favoring firm union and, therefore, permanent cure; the sutures are readily removed leaving nothing to irritate the tissues and cause sinus formation. The same method may be adapted to other forms of hernia.

Treatment of Pneumonia.—In the recent numbers of the *Practitioner* numerous interesting articles have been written by the best authorities of England on pneumonia, its various phases and treatment. In the March number J. Duschfeld has briefly reviewed the various modes of treatment of the past, and concludes that the routine use of such methods as venesection, large doses of tartar emetic, or digitalis have never reduced the mortality of the disease, and, since each individual case presents its own peculiar indications, no routine treatment should ever be adopted. He advises, so far as the general management and diet are concerned, that the patient should always be kept in bed, in a well-ventilated room (60° to 63° F.) and should wear light flannel garments. A daily bath in tepid water should be given and the mouth and tongue kept clean and moist. The food should be light, but abundant and nutritious. Milk (3 to 4 pints in twenty-four hours) mixed with lime-water, together with beef tea and broths are usually well borne. Too much liquid food should not be given, especially in alcoholic patients, on account of the danger of producing flatulence and tympanites which may cause cardiac dilatation, to which alcoholics are particularly prone. He usually gives from the onset quinine (two doses, 5 to 10 grains, in twenty-four hours), and the application of an ice-bag to the affected side, except in old people and those troubled with bronchitis. For the pleuritic pain, a mustard poultice, or, if severe, leeches give considerable relief. Morphine may safely be given in the early stages. The use of quinine, ice-bag and repeated cold sponging usually keeps the temperature down sufficiently, but the cold bath or ice-pack may be necessary. Antipyretic drugs are seldom used at the present time. The circulatory system requires the most careful attention. Except in plethoric subjects, the use of digitalis should be begun early. In old people, alcohol and carbonate of ammonia have better effects. The subcutaneous use of strychnine is often beneficial, and where deficient aeration exists the use of oxygen is advisable. For insomnia, morphine may be used at first, but when expectoration appears it may be a dangerous drug and chloralamid (10 to 20 grains) is more useful. Paraldehyde (2 to 3 drams), especially in alcoholics, is particularly efficacious. The noisy, active delirium is best treated by the cold-pack or bath combined, if necessary with the above hypnotics. The presence of albumin and casts in the urine is usually due to the high temperature and, therefore, re-

quires no treatment. If collapse occurs at the time of crisis, hot applications should be used and stimulants, such as alcohol and strychnine, subcutaneously.

Gangrene of the Lungs.—There are three varieties of this, the diffuse, the circumscribed, and the pleuropulmonary, and the last two, according to H. Vulliet of Lausanne (*Revue Méd.*, Feb. 20, 1900), are best treated by operation. Portions of one or more ribs are removed, the gangrenous cavity entered, and all pus-pockets broken up. Free drainage is established. If the pleura is not adherent the risk of the operation is increased, but the most serious complication is hemorrhage, which can be stopped only by firm packing. Following the operation the cough and expectoration may persist, but it is no longer fetid, is less purulent, and with internal medication slowly subsides. Success depends less on surgical ability than on an early and accurate diagnosis.

Progressive Muscular Atrophy.—The peroneal type of this disease is rare and the report of two cases by T. Diller (*Phila. Med. Jour.*, March 17, 1900) is of interest. The especial points of note in these cases were: The occurrences of the disease in two members of the same family; its slow, insidious onset in the leg muscles with the steady progress of palsy and atrophy, with later involvement of the thighs and then of the arms; the absence of knee-jerks; the age of onset, in both cases before twenty years; the absence of hypertrophy; the presence of quantitative and qualitative electrical changes in the wasted muscles and the absence of pain. The author contributes nothing to the pathology of this affection, as his patients have not come to autopsy. He believes, however, that the disease is of the myopathic type of atrophy in that it is due to an original embryologic defect and is a family affection.

Senile Cataract.—From time to time there are reports of the spontaneous disappearance of senile cataract. These reports have been fully substantiated and the foremost ophthalmologists now freely recognize the possibility of this sequence. W. L. Pyle (*Phila. Med. Jour.*, March 17, 1900) considers this subject in detail showing that the reported cases may be classified as: Cases in which there was absorption after spontaneous rupture of the anterior or posterior capsule; cases in which there was spontaneous dislocation of the cataractous lens; cases in which there were intracapsular resorption of the opaque cortex and sinking of the nucleus below the axis of vision, after regenerative changes in Morganian cataract, without rupture of the capsule or dislocation of the lens; cases in which there was complete spontaneous resorption of both nucleus and cortex without history of ruptured capsule, dislocation or degenerative changes of the Morganian type, and cases of spontaneous disappearance of incipient cataract without degenerative changes or marked difference in the refraction. He further reports illustrative cases of each class. With reference to the treatment of senile cataract he says that drugs have proven valueless, and, that, further than good hygienic modes of living, careful and repeated refraction, and the proper use of the eyes, nothing has yet been demonstrated to be of distinctive curative value.

Lesions in Brain Concussion.—An interesting post-mortem account of a severe fracture of the skull and its effects on the brain is given by G. Hauser (*Deutsch. Archiv f. klin Med.*, Bd. 65, Hft. 5 and 6). The fracture was due to a blow in the right temporal region and from there extended forward to the posterior part of the orbital roof anterior to the wings of the sphenoid, whilst below it reached the middle cerebral fossa. An examination of the brain showed the changes to be most marked in the right corpus striatum and left thalamus. The nodullary sheaths appeared segmented and degenerated and the axis cylinders swollen. No marked lesions could be found in the ganglion cells. Dilatation of the perivascular lymph-sheaths was present in the affected areas, but no hemorrhage. Over the cortex, opposite to where the blow was received, there was extensive meningeal hemorrhage but not at the site of injury. The peculiarities of this case consisted in the severe central changes without cortical involvement and in the absence of all signs of contusion in the meninges and cortex. The symptoms the case presented were briefly as follows: First, concussion signs with recovery after several hours. Paralysis of the left arm and tongue with incomplete paralysis of both legs soon followed. Cystitis with peritonitis and hyperpyrexia preceded death.

Fracture-Dislocation of Humerus.—B. F. Curtis (*Annals of Surgery*, March, 1900) says that fracture-dislocation of the upper end of the humerus requires very early operative interference, except in the few cases which can be reduced by manipulation. Operation consists in resection or reduction. The best functional result obtained after resection is not to be compared to the nearly perfect joint sometimes obtained by reduction. The result of reduction may be far from this perfection and yet be as good as the best result from resection. Resection is easier and leaves a more easily drained wound. For anterior displacements the incision parallel to the anterior border of the deltoid is best. Subglenoid and posterior displacements require posterior incision, preferably Kocher's. The head may be fastened to the shaft by either a wire or a pin. The great danger of the operation is infection, and a small drain is advisable where perfect asepsis has not been attained. It is very important to begin passive motion early, ten to fourteen days after operation, superintended by the surgeon. Voluntary motion is not allowed until consolidation is well advanced. Early motion prevents adhesions, and, more important yet, helps to prevent atrophy of the muscles, which is bound to occur to some extent, and partly explains the difficulty of obtaining good functional results when operation is done more than a

month after injury. After resection the patient may move the arm as freely as he chooses after the wound is healed.

Angina Pectoris.—Wm. Miller Ord (*The Polyclinic*, London, Jan., 1900) says that in attacks of this syndrome we are to consider degeneration of the heart-muscle, dilatation, hypertrophy, valvular disease, and arterial tension. There is a class of cases with feeble, ill-nourished heart, low tension pulse, and overirritability of the nervous system. In case of valvular disease, compensation may be temporarily upset by excitement or exertion, and may result in a characteristic attack of angina. Attacks are brought on also by moving about actively after a meal, by going from a warm room into a cold wind, by digestive disturbances, and by constipation. Glycosuria not infrequently accompanies the attack. With regard to treatment, have the patient avoid excitement or overexertion, take rest after meals, and keep the bowels open. Nitroglycerin or digitalis may be indicated; or, sometimes one-hundredth of a grain of nitroglycerin with five or ten drops of tincture of digitalis may be given, three times a day, for long periods with benefit. Anemic patients require iron.

Movable Kidney.—C. M. Moullin (*Brit. Med. Jour.*, March 10, 1900) says that during life the kidneys with undisturbed anatomical relations possess a range of movement of from 3 to 5 cm. Therefore, it is hard to define a movable kidney. The most satisfactory test is the failure of the kidney to reascend with the diaphragm on tranquil expiration when the patient is standing erect and has forced it down by deep inspiration. This is a sufficient test even although the kidney come only low enough for its lower end to be felt. On the other hand, when it follows up the diaphragm, it is not unduly movable even if half its surface is palpable. The kidneys are maintained in position by pressure of the abdominal viscera, and by the way they fit into the lumbar recesses which are pear-shaped with the small end downward. Neither of these two factors is sufficient alone. In women the lumbar recesses are more shallow and cylindrical, especially on the right side. When man assumed the erect posture, the lumbar recesses became shallower and broader, especially at the lower end; gravity increases the tendency to free mobility, and the other viscera being in front exercise their restrictive influence at a mechanical disadvantage. Movable kidney is certainly hereditary and common, more in women especially multiparæ, and more on the right side. For treatment one chooses between an abdominal belt, with massage and exercises, and nephrorrhaphy. The belt succeeds only in mild cases. Nephrorrhaphy never fails if properly executed.

Diffuse Infective Peritonitis.—Persistently fatal as are the majority of cases of this condition yet during the past five years prompt surgery has resulted in recovery in a number of instances. Chas. H. Goodrich (*Brooklyn Med. Jour.*, March, 1900) cites twenty-eight cases, of which sixteen were due to appendicitis with 5 recoveries, two due to pancreatitis with one recovery, and one to salpingitis, with recovery. The others were all fatal and were due to typhoid ulceration, ulcer of transverse colon, carcinoma of colon, intestinal obstruction, and hemorrhage into the peritoneal cavity. Two were post-operative. The types of diffuse peritonitis are: The acute septic, with scant serous exudate and many streptococci, very fatal and usually post-operative; the suppurative; and the fibrinoplastic, where the suppurative process is accompanied by a tendency to form adhesions. As to treatment, dry sponging or free irrigation with salt solution met with equal results. For drainage glass tubes are to be preferred, wicking works fairly well, gauze becomes clogged, and in two cases, fecal fistulæ followed the use of rubber tubes. In two of the successful cases no drainage was used and the foot of the bed was raised to an angle of 45°. The author advises that the intestines be handled as little as possible, manipulations to be made with instruments where suitable; and he questions whether the shock induced by mopping the serous coat does not counteract the benefits of the mopping.

Constipation in Infants.—A good means of combating the constipation of infants is to give a decoction made of prunes and two to three grams of the pods of senna or of senna combined with manna. M. Sevestre prescribes the following preparation:

℞ Boiling water.....℥vi
Manna in flakes.....℥i
Senna pods.....3i
Powder of burnt coffee.....3iiss.

M. Strain and administer during the day.—*Bull. gen. de Therapeutique*, 8 Feb., 1900.

For Acute Bronchitis.—For this most painful stage, with intense cough and no expectoration, when the ordinary remedies are often of little service in easing the patient, Edgeworth recommends caffeine in connection with alkalies. He gives twenty to thirty grains of citrate of acetate of potassium every three or four hours during the day, and five grains of caffeine on retiring at night. This overcomes the spasms of the bronchial muscles and facilitates expectoration.

Powdered Sulphur for Scabies.—Sherwell has found the following procedure both inexpensive and efficacious, especially when several members of a family are affected, as they can easily all be treated simultaneously, and the parasite be thoroughly routed. The patient takes a bath, soaps himself well, and is then rubbed over his entire body with washed sulphur (a teaspoonful is sufficient). He puts on a clean nightshirt and gets into bed with clean sheets; half a teaspoonful of flowers of sulphur is then thrown over him and the covers shaken a little to distribute the powder. This procedure is repeated every two or three days for a week or two, by which time a cure should be effected.

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THYROID MEDICATION AND OBESITY.

THAT medicine is not free from its fashions is continually evidenced in the reflections of its practice in medical literature. Every dog has his day, however, and the thyroid therapy of obesity, which is now having its noon-day of popularity, bids fair to call forth some dissenting voices. In a recent number of the *Prager med. Wochenschrift* (Feb. 8, 1900) A. Porges enters a protest against the use of this agent in the treatment of obesity, and gainsays the widespread belief that nothing but good can result from its administration. With reference to their susceptibility to thyroid extract there are two classes of patients. The patients of the first class are constitutionally rebellious to the drug and their body weight remains quite unaffected even after prolonged courses of treatment, so that for them at least the extract is useless. The patients who lend themselves more readily to this form of medication are individuals who present certain remote but still demonstrable affinities, both psychically and physically with those effected with myxedema. In these experience has shown that after from three to eight weeks' medication a drop in weight of from four to twenty pounds may be counted on. The advantages attendant on the simplicity of the treatment, however, which requires none of the elaborate dietetic and other restrictions imposed by the older methods, are usually rather more than counterbalanced by the annoying and often really distressing palpitation, restlessness, tremor and insomnia produced. But still more serious is a condition which experiments on animals and clinical observation have shown to be constant, *viz.*, a great increase in the nitrogen coefficient of the excreta, indicating a pathological breaking down of the body albumin. What renders this of still graver import is the fact that the morbid processes once under way do not cease on withdrawing the drug, but that there is always a possibility of their continuing for an indefinite period of time. As opposed to the older, safer, surer and always equally efficacious methods the author thinks that the uncertainties, discomforts and very possible dangers accompanying the use of the gland extract should exclude this field at least from the domain of organotherapy. In closing, he quotes the following conclusions of Epstein's:

(1) Obesity-cures with thyroid extract are practically unsatisfactory, because the attending weight loss is inconstant and under ordinary dosage frequently does not take place at all. (2) Obesity-cures conducted with this agent are not rational; as such can be considered only those which result in the obstruction from the body of fat alone. (3) Finally, the use of thyroid preparations in these cases is uncalled for, as there are enough other means at hand, if properly applied, to effect the desired result without any risks.

THE TOLERANCE OF BROMIDES IN ELDERLY EPILEPTICS.

NOTWITHSTANDING that we are beginning to lay less stress on the drug treatment of epilepsy, care in such methods is none the less important. Of all the sedatives used the bromides still hold first place. It is very unfortunate that so much mystery still cloaks the tolerance of bromides in epileptics. Some patients are able to take large doses, while others show evidences of intoxication on the slightest exhibition of the drug. The symptoms of poisoning are not influenced by age, as bromism in the aged is manifested by the same symptoms as in the adult. It is always dangerous to give very large doses of bromide at the onset in the treatment of epilepsy, although this danger can be met in great part by attending to intestinal antisepsis and cleanliness of the skin. To test the tolerance of the drug in any patient the bromides should be given without adjuvants,

as the latter not infrequently provoke intolerance. The maximum dose should always be determined by a slow, gradual increase of the drug. Individual tolerance varies extremely, especially in the aged, where bromide intoxication is apt to supervene because of organic changes in the heart and arteries. Intolerance of bromide may be shown by indigestion or vomiting, as well as by the usual skin and reflex symptoms.

Féré, in a study on the tolerance of bromides in guinea-pigs (*Revue de Méd.*, Jan. 10, 1900) found that after death the pigs still held more than thrice the daily dose of the bromide salt. He also demonstrated that some epileptics eliminated nearly the entire daily dose of bromide by the urine. Elimination was most active at the beginning of the treatment, an equilibration between the ingested and excreted bromides generally occurred in a period of two or three weeks. While, as a rule, aged epileptics show a diminished tolerance, the reverse is sometimes true, and in such cases Féré shows that the bromides may be administered with surprisingly good results. He presents many illustrative cases; one, man of 61 years, epileptic for twenty-six years, had not been given bromides the first four years of his hospital care, on the ground of the well-known intolerance to the drug in the aged, but as a final resort, when no other medicines could be found to influence the disease beneficially, the patient was placed on bromide. The commencing daily dose was 60 grains, increasing the first year to 150 grains; during the second to 225 grains, and the third year to 240 grains. The annual number of major attacks decreased in accordance with bromide medication in the adult. He passed from daily attacks to one attack in two months; at the expiration of three years' treatment the patient died of an intercurrent disease without manifesting bromide intoxication.

While giving bromides to the aged, particular attention must always be directed toward guarding carefully the threatened intoxication, as a relapse in the disease caused by an imperative suspension of bromide always necessitates a much larger dose of the drug on its resumption.

THE PATHOLOGICAL INSTITUTE OF THE NEW YORK STATE HOSPITALS AND THE MEDICAL SUPERINTENDENTS.

In our last issue we called attention to the threatened destruction of the Pathological Institute of the New York State Hospitals and asked for the responsibility of a movement against this plan of research, the most original and most fruitful that has ever been inaugurated in American psychiatry. It appears now, from the minutes of the last conference of the superintendents of the State Hospitals, that the men who should above all be eager and enthusiastic to hasten progress in our knowledge of abnormal mental phenomena, are the very ones who are ready to undo the advance work that the Director of the Institute has accomplished in bringing psychiatric research out of asylum restriction into the realm of general science.

We were under the impression that the necessity of scientific psychiatric research by the State was universally conceded when this Institute was first founded. Has the new Commission in its omniscience discovered that the benefits of scientific research are not wanted in the care of the insane? Is the President of this Commission the man to assume the responsibility of deciding whether or not the State shall be the patron of scientific work? Shall Dr. Wise dictate that researches in insanity are no part of the State function? This is a most important question. This is a matter for consideration of the medical and psychiatric profession at large as well as the general public, and not a question that Dr. Wise, Mr. Osborn or Dr. Cowles may arbitrarily settle by virtue of their power.

The sole function of the State in this connection is not to act as the simple custodian of the insane; there is implied in this authority the responsibility not only of doing its utmost to relieve the incapacitated, but to employ the material and the facilities, thereby afforded, of discovering the means whereby insanity can be prevented and the accumulating burden of the State relieved. There is something more in psychiatry, or at least there should be, than the grinding out of conventional laboratory data and the descriptions of lesions in individual cases. Such statistics and such data may be accumulated *ad infinitum*, but, without some generalizing principle to illuminate them, they remain only a mass of dead facts, an imperishable monument to industry, but of no vital importance. All hope of vitalizing this material lies in the Institute. That was the purpose of its organization, and is the purpose that must be steadily kept in view. If, in the judgment of those who are responsible for its existence and maintenance, its methods are not tending to that end, the methods should be changed. The Institute, however, as an instrument of scientific investigation should be preserved. Keep it free

from politics but hold it steadily to work along lines tending to the accomplishment of the ends whereto it was organized.

MOSQUITOES AS BEARERS OF MALARIAL INFECTION.

ALTHOUGH the evidence has been steadily accumulating that the responsibility for the infection of human beings with malaria rests upon the mosquito, further tests of this theory will be awaited with interest. The London School of Tropical Medicine is making arrangements to conduct some final and conclusive experiments in that paradise of malaria and mosquitoes—the Roman Campagna.

Under the direction of Dr. Patrick Manson a bungalow is being erected in the most malarious part of the Campagna; this will be thoroughly guarded and screened by mosquito curtains, and here from May to October next will reside two skilled observers with their servants. Every precaution will be taken to guard against the possibility of being bitten by a mosquito. It is confidently believed that the entire party will thus escape malarial infection. In addition to this negative testimony, laboratory-bred mosquitoes which are known to be free from malarial infection will be taken to Rome and allowed to suck the blood of patients suffering from a mild tertian form of malaria, and then taken back to London. After a sufficient time has elapsed for the parasite of malaria to develop in their bodies and reach their venom-glands, these mosquitoes will be allowed to bite several healthy individuals who have never been out of England, or had any opportunity of contracting malaria. If the mosquito theory of disease be correct, then most of the persons thus subjected to infection should develop the disease within ten days.

ECHOES AND NEWS.

NEW YORK.

Duryea Convalescent.—Walter Duryea, the patient at Roosevelt Hospital who has been suffering from fracture of a cervical vertebra, is steadily improving and gives substantial hope of complete recovery.

Obituary.—The New York Neurological Society records with sorrow the death of Dr. John Cargill Shaw, one of its members and its third president. As president of the society he was an indefatigable worker, and his untiring energy was of great service in the early days of its history.

Kent Mansion for a Hospital.—The old Kent mansion, at Second Avenue and Sixtieth Street, Brooklyn, has been selected as the site for the new Bay Ridge Hospital, Dispensary and Training School for Nurses.

Contagious Diseases.—For the week ending March 17, 1900: Measles, 729 cases and 18 deaths; diphtheria, 256 cases and 45 deaths; laryngeal diphtheria (croup), 17 cases and 14 deaths; scarlet fever, 193 cases and 15 deaths; smallpox, 7 cases; chicken-pox, 33 cases; tuberculosis, 230 cases and 188 deaths; typhoid fever, 19 cases and 9 deaths; cerebrospinal meningitis, 3 deaths. Totals, 1484 cases and 292 deaths.

United Hebrew Charities.—The reports for February of the various committees of the United Hebrew Charities show that during that month the total number of applications for aid received and dealt with reached 4209. Relief was refused for sufficient cause in 942 of these cases.

Improvements at Bellevue.—Architects have filed plans with the Building Commissioner for the improvement of the Marquand Pavilion of Bellevue Hospital. The changes include the construction of a new auxiliary operating-room and are to cost $5000.

Misplaced Charity.—A boy named Andrew McEnaney was placed in St. John's Home, Brooklyn, a charitable institution, by his guardian in April, 1899. Several weeks afterward the boy escaped from the Home and went to live with his brother. His guardian instituted legal proceedings to secure the custody of his ward so as to return him to the institution. It developed during the hearing in Court that the boy's guardian holds $10,000 in trust for him; he will, therefore, not be likely again to see the inside of an eleemosynary institution.

Medical Legislation.—Governor Roosevelt has signed a bill providing that the State Commissioner of Agriculture may quarantine a district in which rabies is present. The bill exempts from liability any person who may kill an animal so afflicted. A bill has passed the Legislature appropriating $10,000 per year for the slaughter of animals infected with tuberculosis. The Assembly has passed the bill providing for pure beer, ale and porter by limiting the legal ingredients to hops, malt, pure water and pure yeast. The Senate Judiciary Committee has reported favorably the bill giving the State Board of Charities power of visitation and inspection over the Society for the Prevention of Cruelty to Children. The bill regulating the working-hours of pharmacists and drug-clerks in New York City has been defeated in the Senate by a vote of 21 to 20.

PHILADELPHIA.

Jefferson and Princeton.—The report that Princeton University had made overtures for a

union with Jefferson Medical College has been denied by President Patton, who states that there is no immediate prospect for a medical school at Princeton. Dissection is prohibited in New Jersey.

Homeopathy.—The Philadelphia Post-Graduate School of Homeopathics has practically been absorbed by the Dunham College of Medicine of Chicago, the Dean, Dr. J. T. Kent, also going to the latter place. The question of organizing another school here is being considered.

Health Report.—Deaths in the city for the week ending March 17th were 580, an increase of 69 over those of last week and an increase of 60 over the corresponding week of last year. Contagious diseases: Diphtheria, 63 new cases, 22 deaths; scarlet fever, 56 cases, 3 deaths; typhoid fever, 106 cases, 17 deaths. Measles have been unusually virulent, 63 new cases and 26 deaths being reported. There were 7 deaths from influenza.

Anatomy of Hanging.—At a meeting of the County Medical Society, March 14th, Dr. Edmund W. Holmes stated that the majority of deaths from hanging were caused by apnea instead of dislocation or fracture of vertebræ. In experiments upon the cadaver only one fracture of the atlas occurred. The force of the drop is exerted in the line of the body on the under surface of the chin and occiput. Unconsciousness is caused by concussion of the brain due to the sudden impingement of great force at these points. Asphyxia and deaths follow, a fracture or dislocation of the cervical vertebræ being an accident.

Prize Essay.—No essay worthy of the Samuel D. Gross prize of $1000 having been received by January 1, 1900, the trustees will award the prize October 1, 1901. The conditions governing the prize are that it "shall be awarded every five years to the writer of the best original essay, not exceeding 150 printed pages, octavo in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens." The trustees are Drs. W. W. Keen, J. Chalmers DaCosta, and J. Ewing Mears.

College of Physicians.—At the Section on Gynecology, March 15th, Dr. Barton Cooke Hirst reported the case of a woman who had introduced a piece of wood and a buttonhook into the uterus to cause abortion. She was operated upon five weeks afterward. The uterus and a knuckle of bowel had been perforated. These perforations were closed, the critical condition of the patient making a more radical operation impossible. The surrounding bowel looked healthy. A fecal fistula formed on the second day. Three weeks afterward, a curious slough was noticed when the wound was dressed. This was lifted out and found to consist of the caput coli and four inches of the ileum. The patient now passes feces naturally by the anus. She is comfortable and has gained twenty pounds in weight.

Dr. G. G. Davis reported a most remarkable case. The patient was a married woman of twenty-five. The menses gradually ceased during which time the patient's voice became harsh and hair grew on the face, breast and extremities, shaving of the face being necessary. The left side of the abdomen enlarged and in 1895 a large multilocular cyst of the left ovary was removed. The menses, which had been absent four years, reappeared thirty-one days after operation and the patient gained forty pounds in weight. Fifteen months afterward she became pregnant. During pregnancy her voice became less harsh and the hair fell out of the chest and abdomen and became much less marked on the face and extremities. Two lumps having appeared in the line of the incision, a second operation was performed in January, 1899. A large mass containing both liquid and solid contents was found attached to the posterior surface of the scar and projecting into the abdomen, being nourished by omental vessels. There was no recurrence at the site of the original cyst. Later a lump appeared to the left of the incision and large masses could be felt in the abdomen. The patient died in January 1, 1900. The growth last removed was papillomatous with probable carcinomatous degeneration. An interesting question is, What caused the growth in the scar of the first incision? Two explanations were suggested: That the wound was infected by the cyst contents at the time of operation, or that infection had taken place from contact of the tumor before removal.

CHICAGO.

Hospital for Consumptives.—The contributions for this hospital now amount to $16,376.

Free Medical Dispensary.—Under the auspices of the Englewood Bureau of Associated Charities, a free medical dispensary has been opened at 611 Sixty-third Street. The medical staff consists of Drs. Frank Billings, Weller Van Hook, W. E. Schroeder, Frank X. Walls, Frederick R. Green, Harry Kahn, and H. T. Tillotson.

Defense of Medical Inspection.—The attorneys of the Chicago Board of Education have filed an answer in the Superior Court to the petition for a mandamus, asked by Paul Wright, who asserted that his daughter, Mary, had been illegally prevented from reentering the Kershaw School by the operation of the medical inspection rule. The contention of Mr. Wright, that his daughter had the certificates of the family physician that she was without contagious disease, is answered by the attorneys with the statement that unreliable certificates from family physicians have become so frequent that the Board has been compelled to employ medical inspectors. The attorneys for the Board claim that as the result of the medical inspection in the public schools, there has been a decrease of contagious and infectious diseases since January of over 60 per cent. The officials

of the Board, intend, if necessary, to carry the case to the Supreme Court before abandoning the rule requiring medical inspection of pupils before they shall be permitted to reenter school.

Mortality Statistics.—According to the weekly bulletin of the City Health Department, during the week ended March 10th there were 526 deaths reported. Pneumonia was the chief cause of death, claiming 105 of the total mortality, this being 5 more than during the week preceding and 1 more than the corresponding period of a year ago. Of the total deaths 105 were among children under one year of age, and 112 were of persons over sixty years of age. During the week 12 fewer deaths from diphtheria were recorded as compared with the preceding week, but the mortality from this cause is still in excess of the corresponding period of 1899. The mortality from scarlet fever is steadily diminishing, the 5 deaths from this cause being the fewest reported for any one week during the year, and is less than during the corresponding period of a year ago.

Castor Oil in Neuralgia.—At a meeting of the Chicago Academy of Medicine, held March 9th, Dr. Harold N. Moyer read a paper on this subject in which he said that during the last two years he has treated about fifteen cases of neuralgia by this method, but only seven of these patients were sufficiently long under observation to enable one to speak definitely of the results of the treatment. Some years ago Dr. A. J. Ochsner called his attention to the value of castor oil in the treatment of neuralgia, particularly of the fifth nerve. Five of the cases were neuralgias of the facial nerve and two were typical cases of brachial neuralgia. Of the cases of brachial neuralgia, one had lasted one week and the other two weeks. The one of the shorter duration was exceedingly severe and had been under the care of a competent neurologist for more than a week. He was given a large dose of castor oil at one o'clock, and by four o'clock the pain had largely decreased in the arm; the following night he rested well and the next morning the pain had practically ceased. Three or four doses of the oil were taken afterward, and there was no return of the pain. An acute and recent case of neuralgia of the inferior dental nerve was cured in two weeks. Other forms of neuralgia were treated with the oil with satisfactory results. The oil is administered in the morning before breakfast and the dose is from one to two ounces.

Histopathology of Melanosarcoma of the Skin.—At a meeting of the Chicago Pathological Society, held March 12th, Dr. Alfred Schalek read a paper on this subject. Melanosarcoma of the skin was previously regarded as a connective tissue tumor, but this theory has been recently the subject of much controversy among pathologists since Unna first declared that it originates from the epithelium of the surface. Ribbert takes another view, claiming that a special pigment carrying connective tissue cell, the chromatophore, is the only possible matrix of pigmented moles and melanosarcoma arising from them. The histological examination of sections of several pigmented nevi and melanosarcoma of the skin show very nicely the gradual separation of pigmented epithelium from the rete; they become isolated and undergo a metablastic change and are surrounded by fibrillar connective tissue, form alveolar nests of new cells, and are particularly stellate and branched cells of the shape of chromatophores. The writer arrives at the same conclusion as Unna, that melanosarcoma of the skin is of epithelial origin and should be classed with carcinoma.

Nitse's Cystoscopy in the Female.—Dr. Gustav Kolischer, at a meeting of the Chicago Medical Society, held March 14th, read a paper on this subject. The principle of modern cystoscopy consists in unfolding the bladder by distending it to such an extent that its inner surface becomes visible, throwing light into the viscus either by means of reflected mirrors or by introducing an electric lamp into the cavity. The bladder is distended with air or water. The first method was introduced by Pawlik, and later on utilized by Kelly. For the second method the profession is indebted to Nitse. In performing Nitse's cystoscopy the bladder is filled with water through a catheter; general or local anesthesia is not required. Nitse's method is preferable to others as far as the comfort of the patient is concerned. From an experience extending over ten years, and a large amount of clinical material to work on, after having previously used Pawlik's cystoscopy, the author believes that cystoscopy as practised by Nitse is far superior to any other method in that it is exact and comparatively harmless.

GENERAL.

A Needle in the Appendix.—A sewing-needle, two and one-half inches long, was recently found in the vermiform appendix of a patient operated upon at Hartford, Conn., for appendicitis. The young woman remembers having swallowed a needle several years ago.

Studying Plague Quarantine.—The President of the Board of Health of Honolulu is visiting the various quarantine stations of the United States to study the methods of managing infected vessels and crews. It is said that he comes at the request of the Federal Government. In the practical management of a plague invasion he is doubtless able to return compliments, owing to his recent successful encounter with the disease at home.

The Price of Drugs.—Justice Russell of the Supreme Court, N. Y., has handed down a decision dismissing the complaint in the action brought by the John D. Park & Sons Co. against the National Wholesale Druggists' Association for an injunction restraining the defendant from refusing to sell patent medicines except on an agreement to maintain the rates set by the defendants at which the goods are to be retailed.

Smallpox in Paris.—Smallpox is considered to be increasing in Paris. Active steps are being taken to stamp it out. In view of the approaching opening of the Exposition the importance of this becomes apparent.

Divine Healer Arrested.—A "divine healer" has been arrested in Boston charged with using the mails for fraudulent purposes. His specialty is "absent treatment," and he had been so successful in duping people that he employed about a dozen female typewriters and copyists. It is encouraging to know that one of this pestilential gang is in the clutches of the law, with a prospect of being subjected to fine or imprisonment.

Christian Scientists Sued.—A man who was subjected by his family to Christian science treatment at Baltimore has brought suit against the readers of the First Church of Christian Science in that city, demanding $20,000 damages. He was under treatment by the "reader" of this church for more than three months, during which time he steadily failed, but was finally restored to health by a regular physician, who was fortunately called in.

The Antituberculosis Congress.—Under the patronage of Her Majesty the Queen of Italy, the Congress for combating tuberculosis wiss assemble at Naples, April 25 to 28, 1900. Physicians, naturalists, and engineers, as well as representatives of social and philanthropic sciences, are entitled to take part. The Congress will be divided in four sections, each having a separate committee of arrangements, as follows: (1) Etiology and prophylaxis; (2) clinical pathology; (3) therapeutics; (4) sanatoria. His Excellency the Minister Vavelli is president of the Congress and Professor Enrico de Renzi is chairman of the general committee of arrangements.

The Future.—Health Officer Seys, in his annual report to the Board of Public Affairs of Springfield, Ohio, states that last year only 718 children were born in that city, which has a population of 45,000. Of this number of births 216 were the children of the 1075 Catholic families, so that there were born to the remaining 39,625 inhabitants only 502 children. Instead of 718 children there should have been 1808, if the births had been equally divided among all classes. "Such conditions," observes the doctor, truly enough, "result in the downfall of all nations."

Contagious Pneumonia.—On March 8th John Swarts of Deckerstown, New Jersey, died of pneumonia. He was ninety years old. Two hours after his funeral his daughter, aged sixty-five, died of the same disease. Another daughter lay in an adjoining room seriously ill with pneumonia, and she died on March 16th. A married daughter came to nurse her father and sister, and she became ill with pneumonia and had, on March 16th, but slight chance of recovery. A son and his wife have since been afflicted with the same malady. The community has become alarmed at the evidently contagious nature of the pneumonia and will not help the sick people.

A Bad Case of Indigestion.—Arthur Shult, a dime museum freak who has posed as the "Human Ostrich," and whose specialty was the apparent eating of glass, old iron, nails, chains, etc., had to undergo gastrotomy at Johns Hopkins Hospital on March 17th. His method was to deceive his audience by adroitly palming the indigestible objects he was supposed to swallow. His reputation spread so that a class of medical students arranged for a private exhibition and frustrated his attempts to palm by compelling him to remove his coat, without the sleeves of which he was helpless. He then deliberately swallowed the junk he had intended to palm. He soon became ill and was operated on by Dr. Halsted.

Obituary.—Dr. Samuel Hayes Pennington, Princeton's oldest graduate, died at his home in Newark, New Jersey, on March 13th. He was ninety-four years old. Until about three years ago he was accustomed to take long walks and his step seemed as firm and brisk as that of a young man. He was graduated from Princeton in 1825. After leaving Princeton he attended lectures under the Rutger's Medical Faculty of Geneva College, and he received the degree of M.D., 1829. For seventeen years he was a member of the Newark Board of Education. He was a member of the Princeton University Board of Trustees and President of the Newark City National Bank. He was corresponding member of the Medical Society of Munich and of the Royal Botanical Society of Ratisbon. Princeton conferred on him the degree of LL.D. in 1835.—Dr. Thomas B. Hood, a prominent physician of Washington, D. C., died in that city on March 15th, at the age of seventy-one. He served as a surgeon in the Civil War. Subsequently for eleven years he was medical referee of the Pension Office. He had been a professor in the Harvard Medical School and was identified with many charitable institutions.

The Plague.—The Plague is reported to be still raging on the Island of Mauritius, the weekly death-rate averaging from 50 to 75 victims. Since the outbreak of the plague, January 25, 1899, between three and four thousand people have been attacked and 80 per cent. of these unfortunates have succumbed to the disease. The President of the Superior Board of Health of Mexico reports to the United States Marine Hospital Service that after thorough and careful investigation he is able to state that no case of bubonic plague has occurred on the Island of Cozumel, off the coast of Yucatan.

A new rat-proof quarantine wharf has been constructed in the Honolulu harbor. It is built on copper-sheathed piling, is well isolated, and entirely surrounded by water. The total number of cases of plague that have occurred in Honolulu from the outbreak of the epidemic to February 21st, at which time it was exterminated, is

62, of which 53 died and 9 recovered. The Health Board of Oregon has addressed a communication to the citizens of Astoria, in that State, urging upon them the necessity of poisoning all rats about their homes as soon as possible as a precaution against the spread of the plague in case of its appearance there.

This is now the fourth successive season that plague has appeared in Bombay, and every outbreak has proved more serious than its predecessor. The number of deaths from all causes has steadily risen during the past six weeks. In Calcutta the plague retains its grip and is rapidly becoming epidemic. At Hong Kong during the first week in February a slight recrudescence of the disease occurred, 7 cases being reported on the first of the month and 8 on the second. Japan seems to be entirely free of the plague, and so is the entire continent of Europe. The success in stamping out the disease in Oporto is a most encouraging demonstration of the fact that it is possible to eradicate it, even if it seems to have obtained a substantial foothold.

CORRESPONDENCE.

OUR LONDON LETTER.

[From Our Special Correspondent.]

London, March 12, 1900.

SITE OF IMPERIAL YEOMANRY HOSPITAL—ARE AMBULANCES AND SURGEONS REALLY NON-COMBATANTS?—THE LONDON SCHOOL BOARD'S WATCHFUL EYE—NEW TAX ON EYE-HOSPITALS BY SCHOOL BOARD—DENTISTS FOR THE SCHOOLS—SCHOOLS AS A FACTORY FOR SOLDIERS—ANOTHER MALARIAL EXPEDITION—THE HOUSING-BILL — "LEGITIMATE ADVERTISING" — SCURVY AND POLAR EXPLORATION.

The site of the Imperial Yeomanry Hospital has finally been decided upon, in a bordering region of the high veldt, about twenty miles from De Aar, on the roal to Kimberley. This is in a "sanatorium" region, according to all the authorities on African climate, and the winter climate is delightful, although the appearance of the country about is hardly attractive. To have a large, well-equipped hospital like this close to the seat of war will be a great advantage in every way and save many a poor fellow the long and wearisome journey to Cape Town.

The war-correspondent of one of the London medical journals has struck out an idea upon the protection accorded to ambulances on the field of battle which has, at least, the merit of originality. He declares that it is "absurd" to regard them as entirely non-combatant, since their chief function is the relief of the slightly-wounded with a view of getting them ready to fight again as quickly as possible! There is truth in the suggestion, but we fear the principle asserted would involve rather too much if generally accepted. What of the officers and men of the Medical Corps and the immunity from intentional attack extended to them? For since the full adoption of asepsis two-thirds of their activities are unquestionably directed toward this same result. Their function now is not merely the relief of suffering and cure of the wounded, but the rapid repair of the human units of the great fighting machine. As a matter of fact, their activities add enormously to the actual fighting strength of any given army in a campaign. But are they on this account to be regarded as practical combatants? It is a nice question, but one that will be swiftly answered. The moment your enemy is disabled he becomes sacred from further attack and every agency which can relieve his suffering or save his life comes under the same egis, no matter what use he may be certain to make of his restored health in the future. Abandon this in any degree and warfare ceases to be civilized.

The London School Board is still keeping a watchful and intelligent eye upon the physical basis of education. Its Committee has just reported again upon the advisability of supplying free meals for underfed school-children, recommending that a special subcommittee be appointed to take the matter in charge and arrange for any needs of this sort being promptly met.

Another result of its solicitude about physical fitness is not so fortunate. A number of children whose eye-sight had been found defective, presumably by the teachers, were calmly given cards instructing them to have their vision examined at one of a list of hospitals appended. The result was that one fine morning several of these hospitals were suddenly overwhelmed with refraction-cases. No notice had been given to the hospitals or any attempt made to confine the cards to children whose parents were unable to pay for a private examination, and the staff, not unnaturally, objected vigorously. Now the Central Hospital Council for London has taken the matter up and addressed a formal protest to the Board against their inconsiderate action and very pertinently suggesting that they should appoint qualified ophthalmic surgeons in each school area to have general care of the eye-sight of the children, as is already done in Germany. At the same time the Council advises the hospitals to refuse to examine more than a certain limited number of such children per diem and to weed out all whose parents are not really entitled to hospital-service. What made the inrush of children more provoking was the fact that many of them were found to have perfectly normal vision and accommodation, so that the eye-tests must have been made under the influence of some craze for "physical measurements" by the teachers themselves.

A novel suggestion as to the physical side of education has just been made in Parliament. A member asked that, in view of the bad condition of the teeth of so many of the recruits who present themselves, the Council on Education shall appoint qualified dentists, who shall go to the schools at regular intervals, examine the teeth of

all lads over ten years of age and advise them as to the best measure of preserving them. The Committee of Council, of course, simply promised in chill official accents to "consider" the suggestion. While it would be an admirable thing in every way, especially if extended to the girls as well, we doubt whether the most enthusiastic physical educationalist would approve of turning the schools into a manufactory for soldiers in quite such a barefaced fashion.

The plucky little Liverpool School of Tropical Medicine is to the fore again with another malaria expedition. This will proceed to the West Coast of Africa and go up the River Niger to Old Calabar for the special purpose of working out further problems in the dissemination of malaria by *Anopheles* and its prevention. It is expected to start about the end of March.

The new Government amendments to the Housing-Bill are condemned on all hands as mere "tinkering." Sanitarians and reformers of all shades of political and racial opinion unite in expressing their disappointment. Almost the only step in advance of any value is the granting of power to municipal bodies to purchase or lease land for building purposes outside of their own areas and thus relieve their internal congestion. A number of amendments will be presented in the House, especially with regard to holding the owners of slums and rookeries responsible, in part at least, for the condition of their property and for the expense of its destruction and clearance. As one reformer pertinently remarks: "We do not compensate the owners of bad meat or decaying fruit, why should we those of rotten houses?" At present rates the cost of clearance of slums is something enormous and an intolerable injustice to the community.

English medical journalism is becoming alarmingly progressive. The latest arrival in the London arena, the enterprising and interesting *Physician and Surgeon*, has already in its fourth number reached the point of formally discussing "Legitimate Advertising" by the profession and gives sage advice as to how the young practitioner may get the best results from his church affiliations, his political activities, and his interest in the various reform movements—nay, even favors the use of a carriage, however few patients he may have. He is even advised to call on the neighboring chemists and deal with as many tradesmen as his limited household expenditures will admit. Really, when your Englishman does get to thinking out loud, he is astonishingly frank! The *Physician and Surgeon* practises what it preaches, as it is for sale at all newsstands and announces its bill of contents every week upon a gaily-illustrated poster with huge headlines, upon the bill-boards at the railway-stations. The proper British profession is shocked—but it buys the journal.

A most interesting contribution to our knowledge of the causation of scurvy was made before the Royal Society this week in the papers of Mr. F. G. Jackson, the Arctic explorer, and Professor Vaughan Hurley, the well-known physiological chemist of University College. Both the papers were united in regarding the disease as due to ptomaines contained in badly preserved foodstuffs, rather than to deficiency of certain salts and elements in such foods, as the older view was. Mr. Jackson was able to report, as convincing proof of the correctness of the views of the writers, that, having planned the provisioning of his expedition upon the lines of the theory, not a single case of scurvy had occurred during their long stay in the Polar regions.

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

PROGNOSIS OF GLYCOSURIA AND DIABETES—MARRIAGE OF DIABETIC PERSONS—NEPHRITIS IN CHILDREN WITHOUT ALBUMIN—THE GERM OF WHOOPING-COUGH—ENTEROPTOSIS.

HIRSCHFELD read a paper on the prognosis of glycosuria and diabetes at the Berlin Medical Society, January 31st, in which he claimed that in even severe forms of diabetes recovery is possible. Strict withholding of carbohydrates from the food is not desirable on account of the danger of coma. A patient should be allowed two or three ounces of carbohydrates daily, or even as much as six ounces when improvement is well established. If the disease has existed a long time, or if acetone appears in the urine, the prognosis is much less favorable. Other unfavorable symptoms are attacks of painful colic associated with dysentery. The general appearance of the patient is not a safe guide to a correct prognosis. Often an increase in weight is accompanied by an increase in the excretion of sugar.

G. KLEMPERER said that there is a commonly accepted rule that diabetes is very dangerous in youth and much less so in old age. It had been his experience to meet many exceptions to this rule. For example, sugar was first noticed in the urine of a girl aged thirteen years. There was an unusually marked hereditary taint in this case; nevertheless after excreting for several years urine containing from one to two per cent. of sugar, the patient entirely recovered. Such instances are doubtless merely exceptions to the general rule that diabetes is grave in youth. The commonly quoted assertion that the longer a diabetes exists the less dangerous it is, is denied by Klemperer. The opposite is rather to be affirmed, for the longer the glycosuria exists, the more imperfect will be the assimilation of carbohydrates.

SENATOR spoke of the duty of the physician to advise against the marriage of every diabetic patient; not because of a possible bad effect on the patient, but because of the probability that a tendency to diabetes will be transmitted to the offspring.

At the meeting of February 7th CASSEL discussed the subject of nephritis without albuminuria as occurring in young children, citing several instances in which the more or less abundant

urine was very pale, slightly acid, and of very low specific gravity. Although no albumin could be shown by any of the recognized tests, and neither were formed elements present, anasarca was marked. These and other symptoms led Cassel to the conclusion that there were cases of nephritis without albumin and casts, rather than cases of idiopathic anasarca. In two instances the children died and the microscopic examination of the kidneys showed parenchymatous changes to a greater or less degree.

ISRAEL mentioned cases of nephritis without albuminuria occurring in adults. In one striking instance in which the diagnosis was verified by a microscopical examination of the kidneys, up to the time of the patient's death repeated examination of his urine failed to show the presence of either casts or albumin.

ARNHEIM described his efforts to isolate the germ of whooping-cough, at the meeting of February 14th. In two years he examined, bacteriologically, thirty-three patients suffering from whooping-cough, and made three autopsies upon subjects dying from this disease. He found almost constantly little staff-like bacteria, which were exceptionally formed in the tissue cells. These bacilli appeared identical with those described by Schablewski-Hensel, but they differed somewhat in form and method of growth from the microorganism which Ritter described some years previous.

At the Imperio-Royal Society of Physicians of Vienna, February 9th, C. HERZFELD spoke of enteroptosis, which he defined as an altered position of the abdominal organs, found usually in the female and occurring with great frequency. Its principal symptom is a disturbance of digestion. If the trouble comes from the stomach there will be loss of appetite, a constant feeling of hunger, pain on taking food, eructations, etc. If the intestinal digestion suffers there will be obstipation and diarrhea, gas formation, distention, and a feeling of fulness. Other symptoms of enteroptosis are pain, loss of muscular power, dyspnea, cardiac palpitation, headache, dizziness, and numerous nervous symptoms. Glenmore assumed that the starting-point of the trouble is usually a loosening of the support of the hepatic flexure of the colon. This allows the colon transversum and ascendens to sink, and they drag with them the other organs. This is not the case, for the chief force which keeps the various organs in place is the intra-abdominal pressure exerted from above by the thorax and weight of liver. This is met by the force of the intestines, which varies according to their contents, amount of gas, and so forth. An increase of pressure from above, as due to tight-lacing, or a reduction of the pressure from below. These changes lead to a displacement of the abdominal organs. In the large majority these follow pregnancy and childbirth, but they may follow equally well any sudden emptying of the abdomen, or diseases which reduce the tone of the muscles may bring about enteroptosis. The aim of treatment is to restore the normal pressure by means of bandages, which must exactly fit and should be put on while the patient is lying down.

If the floor of the pelvis is weak it should be strengthened by a perineal operation or by a pessory. As a prophylactic measure, close-fitting abdominal bandages should be worn.

SOCIETY PROCEEDINGS.

THE NEW YORK COUNTY MEDICAL SOCIETY.

Stated Meeting, Held Monday, February 26, 1900.

The President, George B. Fowler, M.D., in the Chair.

The subject of the evening was the discussion of the physiology and therapeutic uses of the suprarenal capsule.

Suprarenal Physiology.—Dr. B. Moore, Professor of Physiology in the Medical College of Yale University, discussed the physiological properties of the suprarenal capsules. He said: Our knowledge of the physiology of the suprarenal comes from three sources. First, from clinical medicine and the pathologic anatomy of these glands with the symptoms due to changes in them. This was the method that first brought the suprarenals into notice. Dr. Addison, in 1851, showed that their degeneration was associated with nervous and muscular asthenia and very greatly lowered blood-pressure. The second source was by the removal of these suprarenal glands from animals. Brown-Séquard, in 1855, showed that the removal of one of these glands from a guinea-pig was often fatal and the removal of both was always fatal. Later observers, however, have denied this. Schaefer suggested that in these cases of survival, accessory glands remained, and they are not rarely found at dissections, which make up for the organs that were removed. The third source of our knowledge of the physiological properties of suprarenal is the one that is now of special interest. It is due to injections of the gland and the observation of the results it brings about. The ingestion of suprarenal by the mouth causes no marked symptoms. Subcutaneously administered the results are neither very striking nor uniform. Intravenously the suprarenal extracts produce marvelous effects. A fraction of a milligram causes a rise of blood-pressure to double or treble what it was before. This is all the more striking as blood-pressure is usually very stable and is affected by very few drugs. The increase of blood-pressure arouses the vagus and this acts as a safety-valve in the prevention of overstimulation of the heart. As a consequence, when large doses are administered, the ventricle stops beating, just as if the vagus were directly stimulated, although the auricles continue beating. If atropine is used to paralyze the vagus before the administration of suprarenal then the heart stimulation is noted. It might be thought that suprarenal substance causes a rise in blood-

pressure by action upon the vasomotor system and constriction of the small blood-vessels. It is, however, a stimulant to all muscle fiber. All the nerves leading to a part may be cut yet constriction will take place when suprarenal extract is administered. If a freshly excised vessel of a diameter of ten to twelve millimeters be acted upon by some fluid containing suprarenal substance, the diameter at once goes down to one or two millimeters. The vessel practically becomes obliterated. This action has been seen very well in the inflamed conjunctiva.

Suprarenal Chemistry.—Extract of suprarenal is not affected by acids. The active principle retains all its energy even in a solution of ten per cent. of mineral acid. Alkalies destroy it at once. At one time the active principle was thought to be a reduction derivative of pyridin acting like nicotine or conine, which are reduction derivatives of pyridin. These substances resemble suprarenal extract so much that it is surprising they have not been used more therapeutically. If suprarenal substance be heated with dilute acetic acid and then with zinc acetate the material obtained is most active. One-millionth of a gram to the kilogram weight of animal will produce an easily perceived effect. Curiously enough a much smaller dose produces an exactly opposite effect, that is to say, it lowers blood-pressure. This happens with a good many drugs, however, and might have been more or less expected.

The subject of the significance of the glands during life is still a matter of unsettled theory. Animals are usually killed by the shock of the removal of both glands. It is an extremely delicate operation, almost inevitably involving important abdominal nerve-plexuses and so readily leading to a fatal termination from surgical shock. Of late, attempts have been made by infection of the glands with various bacilli to produce gradual degeneration. One operator has had reported success in this way and the procedure was followed by the development of the symptoms of Addison's disease. As to the mode in which the suprarenal affects the system, there are two principal theories. Schaefer thinks that there is some substance secreted by the gland which keeps up muscular tonicity. Not only the muscular tonicity of the blood-vessel walls, but also that of the whole muscular system. The French school advances the theory that in the course of body metabolism certain substances are produced which lower muscular tone and that the secretion of the suprarenals neutralizes these substances. They urge the fact that the blood of animals from which the suprarenal glands have been removed is toxic for other animals. This argument, however, loses some of its weight when we recall that the injection of blood from any animal whose nutrition is very much lowered may seriously affect a healthy animal.

Preservation of Suprarenal Solutions.—Dr. Lucien Howe, Professor of Ophthalmology at the University of Buffalo, sent a paper on this subject, which was read by the Secretary. The method employed for over a year now in Buffalo with excellent satisfaction is as follows: One-half a gram of the extract of suprarenal capsule is rubbed to a paste, then water is added gradually until there is a solution of one ounce. This is then heated for some time to 160° F. Water being constantly added as the solution evaporates so as to keep the amount of liquid always up to one ounce. Fifteen grains of boric acid are then added and the solution is ready. It will keep for weeks. The suprarenal extract is used in the eye in the shape of small wafers. To make these the extract is rubbed up into a paste and then mucilage added to give it consistency. These feel somewhat rough but are unirritating when moistened. The addition of formalin, 1-10,000 or the employment of a concentrated extract in glycerin diluted as required are good methods for preserving the substance. But both the formalin and the glycerin have proved irritating to some eyes.

Suprarenal Therapy.—Dr. W. H. Bates then read a paper, which see p. 441.

Suprarenal Extract for Nose and Throat.—Dr. H. L. Swain, Professor of Otology and Laryngology in the Medical College of Yale University, said: The first use of suprarenal extract in disease of the nose is to open up an occluded nostril. It acts promptly on the muscular fibers of the erectile tissue of the nose and it is wonderful how soon after its application a completely shut up nostril is free for respiratory purposes. It does not affect infiltration and it has no effect where there is no muscular tissue. When administered in conjunction with cocaine it produces the greatest possible contraction. No unpleasant symptoms follow its administration and it should be used freely. No intoxication or constitutional symptoms such as occur with cocaine follow it, and no habit develops from its use. In acute rhinitis the suprarenal lessens the congestion and consequently the secretion. Unlike cocaine, the membranes do not become accustomed to it and it can be used any number of times. Owing to its effect on secretions from the nose, it would seem to be the ideal remedy for hay-fever. Others have found that even when employed internally it acted very favorably on the disease. Such has not been our experience at Yale. When applied locally, however, we have found it extremely beneficial. After the application, oil of eucalyptus may be inhaled several times a day and especially just after the application. The asthmatic attack which occurs so often in connection with hay-fever as the result of pressure within the nose is promptly relieved. In these cases nitroglycerin, used in conjunction, seems to be of advantage. As a hemostatic in surgery of the nose, suprarenal extract is an extremely useful drug. Every specialist knows how much time is lost after operations on the nose while waiting for the bleeding to stop. If a solution of suprarenal extract is applied before and

after the application of the cocaine in these cases there is absolutely no bleeding. There are those who say that secondary hemorrhage occurs more frequently after the application of suprarenal extract for nasal operations than where it is not employed. Such has not been Dr. Swain's experience. The extract does not close up the varicose veins which sometimes exist upon the septum of the nose, but that seems to be because there is not enough tissue in the overstretched walls of the vessels to react to its influence.

Tonsillitis.—Suprarenal extract is an extremely useful remedy in tonsillitis. It gives great relief in all forms of the trouble. Patients speak of the immediate increase of space in their throats. Quinsy patients who have been suffering severe pain get some relief at once and are able to take the nutrition which they have had to deny themselves for days. When applied to the third and fourth tonsil it has a wonderful constringent effect which greatly relieves respiratory symptoms. The hypertrophied third tonsil can be removed bloodlessly under its influence. Acute edema of the glottis, especially in its early stages, is very favorably affected by the spray or by the local application of suprarenal extract.

Suprarenal Extract in Asthma.—Dr. S. Solis Cohen of Philadelphia said that asthma is not a nosological entity, but is associated with a great many different conditions due to very various causes. It is usually considered to be a paroxysmal disease without any gross, morbid pathology, although it may be associated with organic lesions of the most varied description and is especially prone to occur in renal and cardiac troubles. Simple asthma, without lesions or with but functional lesions, by which is meant pathologic alterations that have not as yet been detected even with the most refined methods, is due very probably to bronchial spasm. Occasionally it is due to spasm of the blood-vessels of the lungs, although in this case it is the pulmonary rather than the bronchial circulation that is affected. At times bronchial asthma is undoubtedly due to turgescence of the mucous membrane of the bronchi. It occurs, then, especially in highly neurotic individuals and is often associated with hay-fever. At times there is in these cases an alternating or continuous albuminuria. The extract of adrenals is not good for all cases of asthma, but will be found to benefit those patients who suffer from vasomotor disturbances, patients such as urticaria, fictitious urticaria, or dermography. Hay-fever patients who suffer from various neuroses who are very sensitive to changes in the weather and have capricious digestive disturbances or occasional cyclical albuminuria are especially benefited by the administration of the adrenal extract. It does not cut short paroxysms that have been once begun, but it mitigates their severity and lengthens the interval between them. The fear of the recurrence of paroxysms which haunts such patients and makes life so miserable is greatly lessened. The crucial test as to whether a patient is liable to be benefited is found in the fact that such are rendered worse by the inhalation of nitrite of amyl.

Suprarenal Extract in Hay-Fever.—Dr. H. Beaman Douglas said the discovery of the century is undoubtedly the use of suprarenal extract for this condition. In the perennial sneezing catarrh, with white, swollen turbinated bones, it is a most useful remedy. It will abort ordinary acute catarrh. Used internally it has a marked effect in lessening the symptoms of hay-fever and gives marked relief to the patient in twenty-four to forty-eight hours. Where five grains are given every hour distinct local effects are soon noticed. The nose is soon restored as a breathing organ, there are no dangerous sequelæ, no toxic symptoms to be feared and no liability to the formation of a dangerous habit. In certain patients some vertigo is noticed, the heart becomes a little more rapid than usual, and there is some nervous excitement, but nothing that need cause any worry. The only dangers of the remedy are theoretic and are not seen in practice. There is but one possible inconvenience that can be foreseen, and that is if the drug should be used constantly and persistently, the lessening of the blood-supply to the nasal tissues may lead to atrophy. The extract will abort asthmatic tendencies and will frequently arrest asthmatic attacks, although it will not affect asthma when the affection is fully developed; where, as is often the case, the asthma is due to congestion of the nasal passages, it will surely be benefited. Asthma on a gouty or rheumatic basis will also be benefited. When the asthmatic attacks are associated with an atheromatous condition, or are caused by interstitial nephritis, they will not be benefited. As a rule neurasthenic and neurotic patients in whom asthma develops are most helped. The extract may be applied on pledgets of cotton or by the spray every two hours until relief comes. The application or spray may be repeated whenever the symptoms return.

Suprarenal Extract in Laryngitis.—Dr. H. Holbrook Curtis said that in all forms of laryngitis suprarenal extract relieves the congestion, lessens the swelling and diminishes the pain. In addition to the spray a swab saturated with suprarenal solution should be used in the pyriform sinuses. In the laryngitis of singers, where the affection is not severe but yet is sufficient to prevent them from singing in public, an application of suprarenal extract in this way, five to ten minutes before a performance, will entirely restore them their voice and tone. The insufflation of the powdered extract gives the greatest relief to the dysphagia which is so prominent a feature of the disease. For relaxed vocal cords there is no remedy equal to the suprarenal extract. It acts not only to relieve any congestion in the neighborhood of the cords, but by a direct tonic action upon the muscles it tones the whole larynx. A marked feature of its use is that it is of equal service in congested as well as relaxed conditions.

Suprarenal Extract in the Urethra.—Dr. J. A. Moore has used suprarenal extract more than two hundred times in the urethra. He has found

that instrumentation can be accomplished without any bleeding and with the production of very little irritation under its use. A ten-per-cent. unfiltered solution injected into the urethra completely relieves its irritability. When a stricture is to be stretched it lessens the congestion, increases the caliber of the urethra, and prevents all bleeding. As its effect passes off quickly, if more than two sounds are to be used at one sitting, a second injection of the suprarenal extract should be made. No danger is to be feared from constitutional symptoms or from the local action on the urethra of any amount of the drug. In six meatotomies, Dr. Moore has used a twelve-per-cent. solution injected hypodermically and has had very little bleeding after the operation. When slight bleeding occurred it was at once controlled by dropping some of the suprarenal solution on the bleeding vessels. In gonorrhea the injection of suprarenal extract in two cases gave complete relief from the smarting, burning pain of urination during the acute stage of the disease. For chronic gonorrheal patches in the deep urethra, it may be applied as a paste through the endoscope and gives good results. In gleet, suprarenal given every two hours is the best cure for the morning drop.

In the discussion Dr. Vansant of Philadelphia said that for the granular condition of the vault of the pharynx, which so often occurs with the wide nostrils of atrophic conditions in the nose, suprarenal extract gives excellent results. In hay-fever the internal administration of the drug does good, but its local use is more advantageous. Solutions of the suprarenal are very prone to decomposition. Great care should be taken, then, to avoid contamination and to prevent the development of septic material not only before but after its application. The suprarenal solution should not be used as a spray, but should be applied on cotton swabs in order to avoid all danger of affecting the accessory sinuses of the nose. Secondary hemorrhages after nasal operations need not be feared if another astringent, for example, a weak solution of a silver salt, is applied.

Dr. R. H. Cunningham said that he does not share the enthusiasm for the suprarenal capsule that seems to be felt by so many. He has seen at least one case where both glands were completely removed from a dog and after two years the dog is still alive, seemingly without any bad effects. He has seen a bucketful of the extract given to dogs by the stomach without any effect. Such diseases as hay-fever and asthma would be benefited by any animal extracts if the suggestion were given that a new and powerful remedy was being used which was sure to do them good. A word of warning seems necessary with regard to the use of solutions of suprarenal extract in the eye. The extract is prepared in large slaughter-houses where aseptic conditions are impossible, and during the process of desiccation virulent germs may easily retain their vitality. There is danger then of setting up severe septic conditions in so delicate an organ as the eye.

Dr. Myles said that the effect of suprarenal extract in the nose is almost marvelous. In ten to thirty seconds the blood is forced out of congested tissues in the nose and they are made almost white. Operations on the nose may be conducted practically bloodlessly, even in people who have almost the bleeder's diathesis. Serious operations that made the nose specialist hesitate before the introduction of suprarenal extract may be performed with the flow of scarcely enough blood to moisten the upper lip.

Dr. Phillips said that suprarenal extract is of wonderful assistance in intratympanic operations and in operations in the attic. In these cases the bleeding is usually free and greatly obscures the site of operation. If a few drops of suprarenal solution are instilled before the ether is given and then a pledget of cotton soaked in this solution inserted in the ear when the time for operation comes, the tissues will be properly prepared. The operation will be practically bloodless. The field of operation will remain unobscured by blood and there will be less danger of injuring the facial nerve.

Dr. Hopkins said that there was more danger of secondary hemorrhage after nasal operations when suprarenal extract is used than when it is not. Patients are often at home when the hemorrhage begins and it is very disquieting. It is well, then, always to pack with gauze containing a mild styptic before the patients leave the office. When suprarenal extract is used in conjunction with cocaine there is less prostration from the drug and less tendency to toxic symptoms, because the constriction of the blood-vessels by the suprarenal extract prevents the absorption of cocaine to any serious extent.

NEW YORK ACADEMY OF MEDICINE—SECTION ON SURGERY.

Stated Meeting, held Monday, February 12, 1900.

Charles N. Dowd, M.D., in the Chair.

Complicated Elbow Injury.—Dr. Forbes Hawkes presented a case in which there had been a dislocation of the elbow and fracture of the lower end of the humerus. The patient, a boy of twelve, came to the dispensary after the injury had healed in order to see if something could not be done for the resulting deformity. He was found to have excellent use of the joint, flexion and extension were almost as complete as in the normal joint. It was his left arm and he was right-handed; he had as much power in the arm for all movements as most right-handed boys. Roentgen radiograms seem to show that the fracture in the case was a chipping off of the whole outer condyle of the humerus with part of the inner condyle. A false joint had been formed at the fracture and it was this that gave the good result in the case. The normal joint seems to be anchylozed to a greater or less degree as the result of the healing of the

injury which had taken place. The boy was advised not to have the arm operated on as it is doubtful if as good a result could be secured by any operative procedure. The callus thrown out after an operation might easily interfere with the function of the joint. The deformity which is the only objection to the present condition is, after all, not very marked nor will it attract much attention.

In discussion Dr. Dowd said that the wonderful good functional result in this case should be a lesson to all surgeons as to the amount of good that nature can do by simple conservative processes. Very seldom even after a great deal of interference, is as good a functional result obtained by the most carefully calculated methods. The case teaches how little we know in reality of the result of injuries at the elbow-joint.

Exostoses after Elbow-joint Injury.—Dr. Manley said that he does not think that we are quite justified in saying that there has been a fracture of the external condyle in this case. The olecranon seems to move on the proper articular surface. The projection felt at the back of the elbow might be new bone. It is well known how frequently new bone forms after injuries at the elbow-joints. The case serves to show the uselessness of the X-rays for absolute diagnosis in cases of complicated fracture or of dislocation and fracture. It is extremely easy to mistake the indications that are observed on an X-ray plate. To attempt to use radiograms as evidence in medico-legal cases is absolutely unwarranted. No better proof of this can be found than in the present case in which despite the carefully prepared Roentgen pictures, or best evidence can only be obtained from the old methods of palpation and manipulation. The younger generation of surgeons should realize that the old methods of diagnosis from the physical signs in such cases must be as carefully practised as before the introduction of the X-rays if they are to have any assurance of the value of their diagnosis.

Dr. Forbes Hawkes in closing the discussion said that he quite agrees with Dr. Manley as to the inutility in many cases of the X-rays in making an absolute diagnosis of complicated fractures. Within a few weeks he has had a classical Colles' fracture with all the typical symptoms, deformity, disability and crepitus. After reduction carefully prepared X-ray plates failed to show any sign of the lesion. In the present case, however, the physical signs seem to confirm the X-ray pictures as to the existence of a fracture of the lower end of the humerus in the original injury and the existence there now of a false joint which is responsible for most of the function which is present at the elbow. The combination of the two methods of diagnosis seems to justify the conclusion that this pseudo-arthrosis may often be of very great service in these cases.

Sarcoma of Testicle.—Dr. Pfister presented a very large tumor of the testicle which had been removed some six weeks ago from a young man aged twenty-two years. The tumor proved to be a sarcoma of the testicle and had reached its present size, some eight inches in length and five inches in transverse diameter, after only seven months of growth. The patient made an excellent recovery from the operation. Of course, the question of the possibility of the recurrence of the tumor cannot be definitely set aside as yet. Although the removal was very complete the prognosis is only reasonably good as these tumors are very prone to recur. The case is interesting also because the testicle on the right has never descended, and no trace of it can be found at any place in the genital canal. Usually in these cases it is the undescended testicle which undergoes malignant degeneration. The malignancy has usually been attributed to the constant irritation to which the organ is liable in its abnormal position.

In discussion Dr. Walker said that investigation of the literature of this subject of sarcoma of the testicle shows that the tendency of undescended testicles to undergo malignant degeneration is very marked. So marked, in fact, as to indicate an operation for bringing down an undescended testicle.

Acute Intestinal Obstruction.—Dr. Parker Syms said that this is always a fatal condition unless relieved. It is also a mechanical condition and requires mechanical treatment. The diagnosis is easy, if the symptoms are considered. Once the diagnosis has been made the question of treatment has to be seriously and promptly considered. The condition demands relief as soon as possible, spontaneous recovery may take place by a miracle through the formation of an artificial anus, or intestinal anastomosis, but these occurrences are extremely rare and should not enter into our routine consideration of the affection at all. No cathartic should be given. It adds to the danger. Short of surgical procedure, the only treatment justifiable is the giving of high injections. Even these must not be allowed to delay recourse to surgical procedure. The indication is for laparotomy, as soon as possible after the diagnosis has been confirmed and the inutility of injections demonstrated. Just as soon as the general practitioner realizes this state of affairs the mortality from acute intestinal obstruction will become much less than it is. Opium should not be given. It serves only to mask the symptoms and cause the operation to be delayed unwarrantably.

Technic.—When the vomiting is persistent and projectile in character, general anesthesia has too many dangers. Persistent vomiting can often be relieved by washing out the stomach. While opium should not be used in the early stages of the affection, it should be given as soon as operation has been definitely decided upon. It not only helps the action of the local anesthetic, but is the best stimulant that we have for shock.

Microbe Virulence in Intestinal Obstruction.—Dr. A. A. Berg called attention to the fact that during the time the intestinal contents are retained above the point of obstruction, the intestinal micro-organisms were apt to be rendered in-

tensely virulent. It is well known how intensely emaciated patients may become after only a day or two of suffering from the affection. This was formerly attributed to the shock persistently present, but seems really to be due to the intensified pathogeneity of the microbes in the intestine. The statistics after the operation for intestinal obstruction are bad, mainly because of this virulence. It does not seem advisable then to close up the intestine at once after the obstruction has been removed or even to make a direct end-to-end anastomosis. It is better and more conservative surgery to make a temporary artificial anus and wash out the proximal and distal end of the intestine very carefully. After a day or two when the patient has reacted and the microbic virulence has been lessened, the resection of the intestine may be undertaken. An important thing for the shock in these cases is the infusion of salt solution into the circulation. This should be done, not in large amounts at long intervals, but in small quantities every hour or so. When given in this way the effect is much better and the tonic action more continuous.

Differential Diagnosis.—Dr. Manley said that not only is acute intestinal obstruction very rare, but it seldom lasts more than twenty-four hours. The case is a surgical one from the beginning. It is extremely difficult to differentiate between perforation of the intestines and acute intestinal obstruction. Practically, the only sure differential sign between the two conditions is that in perforation the liver dulness disappears owing to the presence of gas in the peritoneal cavity. Enemata should be given very carefully, not in large amounts and never under much pressure. The intestine is often diseased and may easily give way with a fatal issue. In a recent case Dr. Manley found that a practitioner who had injected a gallon of soapsuds had caused a perforation of the intestines, and on laparotomy the abdominal cavity was found full of soapsuds, sweet oil and excrementitious material.

Dr. Boldt said that there is often considerable difficulty in recognizing when operation must be done. In a recent case, that of a child of twelve, he operated some months ago for perforative appendicitis in which there had been considerable inflammatory reaction in the formation of a good many intestinal lesions. Despite the great care in preventing the reformation of the adhesions, the child became ill some months later with symptoms of intestinal obstruction. The vomiting became persistent and on the second day fecal in character. Notwithstanding this the general condition remained reasonably good. Under the use of enemata the child recovered somewhat. The vomiting grew less, the temperature came down, and the pulse became normal. There was no tympanites. After a day or two the vomiting returned, tympanites developed and considerable tenderness was found. On laparotomy the obstruction was found to be due to a band of adhesion; extensive peritonitis was present. Despite the most careful manipulation the serosa was torn. Eight inches of bowel were resected and an end-to-end anostomosis with a Murphy button made. He then tried to push some of the feces from above the obstruction onward through the button, but found he could not do so. Another anostomosis was then made, but without resection. The patient made a good recovery. At least the child is well now, six days after the operation. As to keeping the bowels quiet after an anastomosis operation for acute obstruction, Dr. Boldt does not believe it advisable. It gives too much chance for the absorption of toxic materials, and the stasis of substances within the gut is liable to decrease intestinal vitality. The ordinary anastomosis is sufficiently strong to stand peristalsis and the movement of material through the intestine and such movement should be carefully provided for as soon after operation as possible.

Dr. Willy Meyer said that it is his custom to press out the excrementitious material from the proximal end of the intestine. There is always an accumulation of material, usually in an intensely fermenting condition, just above the point of obstruction and this should be gotten rid of as soon as possible after the opening in the intestine is made. The intestine should be placed on a set of warm sterile towels for this purpose in order to avoid any infection of the peritoneal cavity.

The Hockey-Stick Incision.—Dr. Willy Meyer described this form of incision which is meant to enable the operator to reach any complications that he may find in cases of appendicitis. The incision is made from midway between McBurney's point and the anterior superior spine of the ilium down to where the femoral artery can be felt pulsating beneath Poupart's ligament. Into this incision the finger is introduced and carried directly across to where the epigastric artery can be felt pulsating. The incision is then carried with a rounded angle at its lower part straight across with the finger in the wound as a guide. This gives it the form of a hockey-stick and enables the operator to reach any complications that may exist in the small pelvis. It serves its purpose very well in all cases, except in very fat patients. In women, particularly, the lower part of the incision gives very good access to the small pelvis if there should be complications in the uterus or its adnexa. In males it is very useful for the drainage of the small pelvis. Dr. Meyer has used the incision in ten cases now and feels that he can recommend it with confidence.

Posterior Rectus Sheath Incision.—Dr. Joseph Wiener, Jr., said that the most available incision for complicated cases is the cutaneous incision alongside the rectus muscle with the incision of the posterior sheath of that muscle. This may be enlarged up and down to any extent required in order to treat complications.

In closing the discussion Dr. Willy Meyer said that a long incision at the side of the rectus muscle divides the nerve supply of the muscle which is so important for the nutrition of the structure in after-life. We have come to realize of late years how much depends upon trophic nerve in-

fluences for the tonicity of muscle and its proper nutrition and function. The hockey-stick incision has not this disadvantage of severing the nerve supply of important muscles and it may be made longer or shorter to suit the circumstances of the case.

Twisted Omentum as Tumor.—Dr. Peck presented the specimen of a tumor which had filled the whole right side of the abdomen from above the umbilicus to the small pelvis. It was found to be composed of the whole of the omentum twisted on itself into a tight roll by the motion of the intestines. It was free except for some recent adhesions, which could be separated easily, and some very firm adhesions in the pelvis. These firm adhesions had evidently existed for a long time and were the true cause of the twist. With both ends of the omentum anchored fast the peristaltic movement in the intestines had rolled the omentum upon itself, as could be seen in the specimen. The symptoms of the case were rather sudden in the onset and resemble somewhat those of strangulated hernia. They were evidently due to the fact that the twist in the omentum had finally become tight enough to shut off the blood supply.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, Held Tuesday, February 6, 1900.

The President, Frederick Peterson, M.D., in the Chair.

Tendon Transplantation in Infantile Cerebral Palsy.—Dr. B. Sachs presented a boy fourteen years of age, one of the original cases of infantile cerebral palsy reported some years ago by Dr. Peterson and himself. He had had a typical cerebral hemiplegia, due to difficulties at birth. The boy called at the clinic because of contracture of the arm. A transplantation of tendons was done by Dr. W. R. Townsend, with a very gratifying result. These cases seem to him to hold out even a better prospect of recovery than the ordinary infantile spinal cases, because in spite of the contractures much more power is left in the various groups of muscles.

Dr. W. R. Townsend exhibited two photographs showing what was the position of the hands and the limbs of extension and flexion of the fingers and wrists at the time the boy first came under his observation. The method selected was to transplant the extensor tendons on to the flexor tendons. The electrical reaction of the flexors was diminished. The anterior pair of the four muscles reacted slightly. On December 21st, under ether anesthesia, an incision was made in the middle of the flexor surface of the arm over the wrist; then the flexor carpi radialis and flexor carpi ulnaris were divided above the wrist and held temporarily by silk sutures. The next step was to make an incision on the dorsum of the wrist and expose the extensor communis digitorum one inch and a half above the wrist. A dissection was then made between the bones so as to connect with the tendons previously cut. The extensor communis digitorum was folded back, as it was too long, and transplantation to the attachments of the flexor carpi ulnaris, radialis and palmaris longus was then made. All the dressings were removed at the end of six weeks, since which time the arm was carried in a sling. The arm is now held in a posistion midway between flexion and extension, and there is a fair grasp, although there was none before the operation. Before the transplantation the hand was helpless and useless. If proper exercises are used the boy will be almost sure to have a useful hand, and will be able at least to use a pen.

Dr. Leonard Weber presented a case for diagnosis as to the mental condition of a man thirty-five years of age, a clerk by occupation. The family history shows a marked tendency to mental disorder. In the spring of 1895 he began to be troubled with slight vertigo, drowsiness, headache and occasional fainting spells. He became somewhat erratic in his habits, and on August 10th developed an attack of acute mania. In November the speaker first saw him while still confined in a private asylum. In December he was transferred to the Bloomingdale Asylum, and in the following May was discharged, the physicians there looking on the case as one of acute mania that recovered. Some months later the man exhibited symptoms of malarial infection and responded fairly well to quinine. He was then put tentatively on mixed treatment, but with negative results. Early in December, 1896, he had a slight serous pleurisy. Some time afterward Dr. Weber located a subphrenic abscess, and, on incision, over one pint of pus was evacuated. The man's recovery was uneventful, and on January 1, 1897, he resumed active work, and has continued at his occupation ever since that time. The patellar reflexes are diminished, and sexual power is lost. The case is presented with the idea of determining the cause of the mania—whether it resulted from an infection.

Amyotrophic Lateral Sclerosis.—Dr. E. D. Fisher reported the case of a woman, forty-nine years of age, who gives a history of mental disorder in her immediate family. The patient presents no evidence of syphilitic infection. She was very ill in each of her two pregnancies, and after the last confinement, which occurred sixteen years ago, she suffered from neuralgia of the leg. In December, 1898, she noticed some difficulty in talking, and ten months later speech failed entirely. About this time she first noticed some difficulty in passing the bolus of food into the back part of the mouth. On December 20th she came under observation. At that time there was inability to speak or swallow, and the jaw was rigid. The tongue was small and short, and rather rigid. Examination showed the same rigidity throughout the muscular system. The first diagnosis was bulbar paralysis. The tone of the voice is now entirely nasal; the tongue small, and the muscles of the neck and jaw so rigid that the

mouth can only be opened slightly. There is an increase of the reflexes. Swallowing is difficult. The rigidity of the tongue and the increase of the reflexes are the special features of the case.

Dr. C. L. Dana suggested that the case is one of amyotrophic lateral sclerosis.

Dr. Joseph Collins concurred in this diagnosis, and said that he reported an exactly similar case in 1892, the spastic condition of the neck and face having been the most pronounced and the initial symptom. From this he inferred that the primary neurons decay before the motor neurons.

Dr. Fisher said that he would accept the diagnosis suggested by the last two speakers.

Diplegia Brachialis Traumatica.—Dr. Pearce Bailey presented a man, fifty-four years of age, who was knocked down and injured by a carriage last December. Two ribs were fractured, and both upper extremities became paralyzed. He was treated for a short time at Roosevelt Hospital. On coming under observation, in January, 1900, examination showed the movements of the neck to be free and painless. The muscles about the shoulders were paralyzed and atrophied, and responded sluggishly to faradism. He complained chiefly of severe pains running down from the shoulders into the arms. There was no paralysis of the legs or the bladder and no anesthesia. The diagnosis was diplegia brachialis traumatica. Kocher maintains that this condition is the result of an extradural hemorrhage, basing his opinion apparently on the existence of the darting pain down the arm. Dr. Bailey thinks there might be compression of the nerve-roots, or hemorrhage into the cord itself. He does not think an extramedullary hemorrhage will cause such symptoms as existed in this case, and, moreover, such a lesion occurring as an isolated one is practically unknown.

Dr. Max G. Schlapp thought if the lesion be due to hemorrhage into the cord there would be more marked sensory disturbance.

Dr. Collins thought the chances are enormously in favor of this condition being hematomyelia. It does not seem to him at all probable that the rapid atrophy of the muscles could result from an extramedullary lesion; it is rather a true atrophic condition dependent on the destruction of some of the motor cells at their origin.

Dr. E. D. Fisher thought that there is not a destructive lesion in the anterior horn, but slight capillary hemorrhages.

Dr. Schlapp thought the hemorrhage must be on both sides in the anterior horns, and if they were so large as to cause such atrophy they must also affect the anterior commissure and the gray matter of the anterior horns.

Dr. Mary Putnam Jacobi did not see why there should be any more marked sensory symptoms here than in an anterior poliomyelitis.

Dr. Percy Bolton said that he had seen quite a number of cases, the great majority having been apparently due to lesions into the spinal cord. Last year, however, he saw one case in which the symptoms pointed to injury of the nerve-roots in the foramina. This patient fell on his head, and entered the hospital with tingling sensations in the distribution of the ulnar nerve. On flexing the head on the trunk the tingling sensations in the arms could be developed, and this led to the supposition that the nerve-roots were involved.

Paralysis of Serratus Magnus-Gliosis.—Dr. William Hirsch presented a man who came under his observation about two weeks ago. The patient said that for two years past he suffered from what he called "an itch on the abdomen." Examination revealed the fact that in spite of the itching complained of there were no scratch-marks visible. There is an area of disturbed sensation on the abdomen. Its upper border is formed by a horizontal line passing through the ensiform cartilage, and the lower border is formed by a horizontal line about six inches lower down. The lateral boundaries are the axillary lines. Further inquiry shows that there is no true pruritus, but a paresthesia. This area is extremely sensitive to heat and cold. Closer examination shows bilateral paralysis of the serratus magnus, as indicated by the wing-like projection of the scapulæ when the arms are held forward and horizontally. There is atrophy of the trapezius and of the latissimus dorsi. The patellar reflexes are normal. These muscular affections must have developed quite rapidly, as the man was examined not long ago by a thoroughly competent physician in a hospital. He assumes that there is here a lesion in the posterior horns in the eighth or ninth dorsal segments, probably a neoplasm, a gliosis. This gliosis by occlusion of blood vessels and the consequent increased blood pressure might have caused the formation of a cavity. Another theory is that the primary gliosis has been too slight to cause any symptoms, but that by proliferation the effect observed has been produced.

Dr. R. G. Wiener said that this patient was sent to him about a week ago for diagnosis. The man is a glazier by occupation, and anyone who is accustomed to work with the hands above the head is likely to suffer from paralysis of the serratus magnus. Careful examination of the affected area, when the patient's attention was distracted, led him to look upon the paresthesia as purely hysterical. The muscular paralysis seems to him entirely peripheral.

Dr. Hirsch expressed great surprise at this diagnosis. There is only one case in literature of peripheral bilateral paralysis of the serratus magnus. Moreover, there are no sensory disturbances in the upper region. He could not reconcile the diagnosis of hysteria with the known pathology of the case presenting such symptoms. The affection of the other muscles made such a diagnosis in his opinion utterly impossible. The comparatively long duration of the case certainly does not exclude a gliosis.

Ophthalmoplegic Migraine.—Dr. B. Onuf presented a young girl who for the past five years has suffered from attacks of pain in the right

upper eyelid, associated with nausea and vomiting. Soon after the beginning of the attack the eyelid began to droop, and in the course of three days the eyelid was closed and the eye appeared to be fixed. After remaining closed for about three days, the eyelid opened again and the pain disappeared. Lately these attacks were less frequent, there being only about three in one year. Examination shows paresis of all the muscles supplied by the third and fourth nerves, but the rectus internus acts well. The attacks are preceded by constipation and chilliness. The case is looked upon as one of ophthalmoplegic migraine.

Dr. W. M. Leszynsky said that he would rather call the case one of recurring ocular palsy. He had seen one case in which there were two attacks in one year. She ultimately recovered completely.

Dr. Onuf replied that vomiting, periodic pain, and the associated tachycardia seemed to him to stamp the case as one of migraine in addition to the ocular palsy.

Paresthetic Meralgia.—Dr. P. Meirowitz presented two men. The first was forty-eight years of age, and first came to him on January 23d, complaining of a gnawing sensation on the outer aspect of the thigh. There were also alternating sensations of heat and cold. Examination shows no objective changes in the appearance of the skin. Over the area, beginning three inches above the external condyle, and extending upward for some distance there is anesthesia to touch, and immediately surrounding this is a region of tactile hyperesthesia. In portions of the affected region the strongest faradic current does not cause the slightest inconvenience.

The second patient was forty-seven years of age, and was first seen on January 6th, when he complained of a burning sensation on the outer side of the left thigh. The trouble came on suddenly eight or ten days previously, and was at first on the anterior aspect of the thigh. Occasionally the sensation is that of hot water boiling under the skin. Just above the knee is an area of anesthesia to cold. The affected area feels cooler to the touch.

Dr. C. L. Dana said that it has been very properly stated by Dr. Meirowitz that these cases are not at all rare. He has seen a similar condition affecting the calves of the legs on both sides. Probably paresthetic meralgia can be found in the distribution of most of the nerves.

Intracranial Tumor.—Dr. Graeme H. Hammond reported a case of this kind. The only lesion discovered at autopsy was an epithelioma growing from the sella Turcica. It measures 7½ by 2 by 1½ mm. The median line of the tumor corresponds very closely with the median line of the skull. It compressed both optic nerves, the optic chiasm, part of both optic tracts and the third, fourth, fifth, and sixth nerves on both sides, both crura, the hypophysis and the inner surface of both temporal lobes. Microscopical examination had not yet been made. In October, 1897, this woman, thirty-four years of age, presented herself, and a diagnosis of encephalic tumor was made. She had a good personal history. About fifteen years ago she hada fall on the back of the head, but this was not followed by any evidence of injury. Some years before coming under observation she began to suffer from a tic in the face, which was relieved by extraction of several carious teeth. Shortly after this the articulation became imperfect for a time, and soon innervation became impaired. In August, 1897, she suffered every morning from intense pain in the top of the head, and later on vomiting was quite troublesome. In October, 1897, examination showed the pupils to be regular and dilated, and responsive to accommodation. The eyeballs moved normally, but showed slight nystagmoid movements. She could not read fine print. Sensibility was normal. The ophthalmoscope revealed optic neuritis. During the next year the same symptoms were present, but to these severe headache, vertigo and a staggering gait were added. In September, 1899, weakness was noticed in the left arm and leg, and after a time a well-marked hemiplegia developed. In January the limbs were rigid, and the reflexes exaggerated. Sensibility was normal in all parts of the body, and smell, hearing, and taste were normal. There was a well-marked double optic neuritis. The tumor was thought to be situated in the motor fibers of the right hemisphere. At the husband's request an operation was performed, although no hope of a successful result was entertained. The tumor was not found, and the patient never rallied from the operation. The remarkable feature is that such a large tumor, pressing on so many cranial nerves, should not give rise to symptoms which would make the location diagnosis reasonably certain. A search through the literature shows the reports of several cases in which tumors similarly situated gave rise to no focal symptoms.

Dr. Sachs said that he has had under observation for the past two years a case giving very much the same symptoms, and he was impressed with the paucity of the usual symptoms of tumor of the brain. The only symptom added of late was double anosmia.

Myelitis, Especially Tuberculous.—Dr. Joseph Collins read a paper with this title. He said that acute myelitis is relatively uncommon. The case reported is that of a woman, twenty years of age, who was admitted to the City Hospital in 1898. Her illness began about three months before its fatal termination, the first thing noticed being a redness and painful swelling of the second metacarpophalangeal articulation. The question arises whether these symptoms are really due to rheumatism or to vasomotor changes. A few days later the right elbow became painful and swollen, and in a few days more the other elbow, one ankle and one knee were successively involved. According to the history she had been treated in Bellevue Hospital for rheumatism. On reaching the City Hospital she had a number of large bed-sores of long-standing. She was pregnant at

the time, and was soon after delivered of a child, which is now living. It was noted shortly afterward that the limbs were absolutely fixed, that there was urinary incontinence, but no sensory disturbances. The cranial nerves were not affected. About two weeks before death there were rigors and elevations of temperature, indicative of septicemia. The autopsy was made twelve hours after death. The spinal canal contained pus up to the second lumbar vertebræ, and from this point upward was a layer of greenish exudate, which reached up to the brain and forward to the optic chiasm. The cord was very much softened between the sixth and ninth segments. The lungs were free from tuberculosis. Microscopical examination of the spinal cord shows the changes to be most marked in the eighth and ninth segments, and least marked in the cervical cord. From one end of the cord to the other the dura is the seat of productive inflammation, and this is true, to a lesser extent, of the pia. The sections made from the eighth dorsal segment show the central area of necrotic tissue limited in front by the commissure. One of the sections from this segment shows a few tubercle bacilli. No bacilli are found in the meningeal exudate. The changes in the ganglion cells are those of advanced diffused chromatolysis. In many of the cells there is a complete disappearance of the achromatic granules. The cells most affected at these levels are those of the internal groups of the anterior horns. Sections from the first lumbar segment show the thickening of the meninges and the inflammatory exudate, and also congestion of the blood-vessels of the anterior horns. The changes in the chromatic granules and the achromatic substances are apparently secondary to the extensive changes in the blood-vessels, and not dependent on rheumatism or tuberculosis. Sections from the various lumbar segments stained by Nissl's method, show variable disintegration and degeneration of the cells of the anterior horns. The processes of the cells show a degeneration similar to that of the bodies. The so-called dislocation of the nucleus of the cell does not seem to indicate to any extent the pathological state to which the cell had been reduced. The changes in the cells of the cervical cord were similar to those in the lumbar region, although less pronounced. Many of the cells are large and stained deeply, while the achromatic substance in the cells is in good condition. The enormous thickening of the pia at this level is well shown in sections stained with hemotoxylin. The cells of the anterior horns show slight disintegration of the chromatic substance only. As the dorsal region is approached the cells of the anterior horns show more marked degeneration changes. Here the remarkable feature is the relative preservation of the cells of Clark's column. In conclusion, the speaker said that he did not believe that the pain in the extremities was the result of rheumatism, but of tuberculosis.

Dr. Schlapp said that the first drawing exhibited shows a very large lesion, which seemed to him difficult to explain by the clinical history, particularly in view of the fact that there were no sensory symptoms. He would like, therefore, to know whether it is not possible that this large lesion might be the result of post-mortem change.

Dr. W. H. Leszynsky suggested that it is possible that the large bed-sore over the sacrum might have had something to do with the septic process and the meningitis.

Dr. Collins replied that he commented, in his paper, upon the point raised by Dr. Schlapp, and had stated that, in all probability, this necrotic area was increased perhaps one-third by an artefact.

REVIEWS.

The Refraction of the Eye. Including a Complete Treatise on Ophthalmometry, a Clinical Text-book for Students and Practitioners. By A. EDWARD DAVIS, A.M., M.D., Adjunct Professor of Diseases of the Eye in the New York Post-Graduate Medical School and Hospital, Assistant Surgeon to the Manhattan Eye and Ear Hospital, etc. Illustrated. New York: The Macmillan Company, 1900.

IN spite of a somewhat misleading title, which would indicate a work on the optical principles underlying normal vision and on the methods of determining and correcting ametropia in its various forms, the manual under consideration will be of practical value to those students and practitioners who wish to familiarize themselves with the use of the ophthalmometer and to understand the theory of its construction. To this extent the book can be recommended, although even in the chapters on ophthalmometry, which form the greater part of the volume, exception might be taken to some explanations. Thus the author's analysis of the correction of ophthalmometric readings and his rules for determining approximately the amount of total astigmatism do not appear to be as exact or as rational as those recently formulated by Javal. The diagrams which accompany the considerations on astigmatism make the entire subject quite intelligible, and form a valuable graphic aid in instruction. As far as the subject of refraction is concerned it must be admitted that Dr. Davis's work is somewhat inadequate. The ophthalmoscopic and retinoscopic methods of determining ametropia are but briefly mentioned, while the trial-case and the ophthalmometer occupy positions of undue importance. The author's opinion that cycloplegics are almost always unnecessary, and his statement that he does not use a mydriatic in more than one per cent. of all cases of refraction will, doubtless, bring tidings of great joy to the "opticist" and "refractionist," however cold their reception by members of the medical profession, who are informed that even spasm of accommodation is not considered an indication for the use of homatropin or of some other cycloplegic. The style of this treatise is rather

careless. Such expressions abound as "many times" for "generally," "Wœlaston" prisms, "cross" cylinders, "oval" for "elliptical," "if" for "whether," "fitting the patient to glasses," "a prolonged time," "to add an increase;" while loose construction, repetition, and a pleonastic use of "that" are noticeable. Aside from these blemishes Dr. Davis's work may be considered a good guide to ophthalmometry. It should not be entitled a text-book on the refraction of the eye.

An American Text-Book of Surgery. For Practitioners and Students. By PHINEAS S. CONNER, M.D., FREDERIC S. DENNIS, M.D., WILLIAM W. KEEN, M.D., CHARLES B. NANCREDE, M.D., ROSWELL PARK, M.D., LEWIS S. PILCHER, M.D., NICHOLAS SENN, M.D., FRANCIS J. SHEPHERD, M.D., LEWIS A. STIMSON, M.D., J. COLLINS WARREN, M.D., and J. WILLIAM WHITE, M.D. Edited by W. W. KEEN, M.D., LL.D., and J. W. WHITE, M.D., Ph.D. Third edition, thoroughly revised. Philadelphia: W. B. Saunders, 925 Walnut street, 1899.

THE appearance of a new edition of this admirable work is to be regarded with unqualified pleasure by all those engaged in or about to commence the study of surgery, for its position is unique in the pedagogical literature of the subject. Probably no other book of the class in the English language is quite so well adapted to the needs of the student, and when the rapid advances of surgical science during the past few years had somewhat outstripped the older issue, in spite of the ever increasing multiplicity of new books offered, the thoughtful instructor was rather at a loss as to what to recommend to his pupils as a substitute. Now that it has been submitted to the pruning and amplification that the swiftness of medical progress demands it may confidently be commended as being fully representative of the science and art of surgery as it is practised by the most advanced operators of today.

In addition to a chapter on the use of the Röntgen rays in diagnosis, among the new topics introduced are a full consideration of serumtherapy, leucocytosis, post-operative insanity, the use of dry heat at high temperatures, Krönlein's method for locating the cerebral fissures; Lorenz's and Hoffa's operations for congenital dislocation of the hip, lumbar puncture, the forcible reposition of the spine in Pott's disease, the treatment of exophthalmic goiter, gastrectomy, several new methods of operating on the intestines, the use of Kelly's rectal specula, the surgery of the ureter, Schleich's infiltration method, the newer methods of disinfecting the hands, the use of gloves, etc.

The sections on appendicitis, on fractures and on gynecological operations have been revised and enlarged and a considerable number of new illustrations added throughout the book.

In spite of the fact of its being a compilation the work is remarkable for its homogeneity and compactness; so skilfully has the work of collating and revising been done that there is a conspicuous absence of the feeling of abrupt transition and imperfect annotation that so often mars the result in similar volumes, when the writings of many authors have been simply juxtaposed and bound between the same pair of covers without the exercise of that rigid sense of the fitness of things which is the whole art of editing.

Borrowing the sacred formula of the ancient prescriber it might be said that the work is to be warmly commended to all those who would acquire their learning *cito, tuto et jucunde;* quickly because the text is concise and well arranged, safely for it represents the teaching of the masters of the science, and pleasantly for the style throughout is agreeable, the illustrations excellent, and the print and paper above reproach.

A Practical Treatise on Materia Medica and Therapeutics. By ROBERTS BARTHOLOW, M.A., M.D., LL.D., Professor Emeritus of Materia Medica, General Therapeutics and Hygiene, in the Jefferson Medical College of Philadelphia; Honorary Fellow of the Royal Medical Society of Edinburgh, etc. Tenth edition, revised and enlarged. New York: D. Appleton and Company, 1899. Pp. xxii-866.

To reach the tenth edition, a text-book must possess inherent merit and any irrelevant matter must have been eliminated from its pages. And when the author of a work on therapeutics himself has a thorough faith in the power of drugs, he is bound to impress his readers with a desire for extensive knowledge of therapeutic resources. Bartholow believes in drugs and concentrates his energies on finding for them a practical use in medicine. He seldom speaks disparagingly of a drug, and often contents himself with merely stating the uses to which the remedy has been put, without attempting a discussion of its relative merits and demerits. The present edition is of the same size and arrangement as its predecessors, with the addition of a short chapter on prescription-writing and the metric system. The latter system the author commends, yet does not use it in stating the doses of drugs. The list of newer synthetic remedies has had some additions, and the work generally has been brought up to date. Three pages are devoted to antipyrine, but half a page to phenacetine; a whole page is all too little for saccharin, and a short paragraph must suffice for beta-naphtol. For the latter substance no internal use is assigned, and its derivative, benzo-naphtol and beta-naphtol bismuth, are not mentioned. The topical application of guaiacol in tubercular peritonitis, hydrocele, epididymitis and orchitis is not spoken of, and among the compounds, guaiacol carbonate and valerianate are omitted. Although a derivative of narcotine, cotarnine hydrochloride, used to arrest hemorrhage, seems out of place among the opium preparations, and methylene blue is sadly confused with methyl blue, or blue pyoktanin. The articles on urethane and paraldehyde are very commendable, the frequent failure of the former drug being attributed to insufficient dosage. Ich-

thyol is well treated, especially as regards its recently developed use in internal medicine. The newer silver antiseptics and iodoform substitutes are discussed at some length, and nitroglycerin is hailed as a "sine quâ non" in the treatment of anemia. The strengths of the pharmaceutical preparations are not stated, the reader being left to arbitrary doses to determine the relation of one preparation of a drug to another, or of either to the drug itself. No reason is given why the maximum dose of the fluid extract of digitalis should be three minims, while the 15 per cent. tincture of the same drug may be given in dose of one dram. The range of dose of fluid extract of ipecac is from two minims to one dram, while that of the 10 per cent. wine of ipecac is one minim to one dram. The book is essentially a work on therapeutics, the materia medica part of it being apparently added for the sake of completeness. And in spite of a few errors that have crept in, we can recommend it to the student or practitioner as a valuable work on the means of curing disease. Its arrangement is pleasing, its descriptions are interesting and clear, and it covers the subject in a very satisfactory manner.

Treatise on Orthopedic Surgery. By DR. E. H. BRADFORD and DR. R. W. LOVETT. Second revised edition. 8vo., 655 pages. Illustrated. New York: Wm. Wood & Co.

IN this second edition the more notable additions are as follows: Calot's operation for the correction of the deformity of Pott's disease; forcible correction in the treatment of scoliosis; coxa vera and fracture of the neck of the femur in childhood; the modern treatment of congenital dislocation of the hip; tendon-grafting for the relief of paralytic distortions; and an extended account of the prevention and treatment of the acquired disabilities of the foot. The illustrations have been carefully selected, those showing the various pathological processes being especially commendable. The new edition fully sustains the reputation of its predecessor as the standard work on this subject.

BOOKS RECEIVED.

The MEDICAL NEWS *acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the* MEDICAL NEWS *will shortly appear.*

THE NERVOUS SYSTEM OF THE CHILD. Its Growth and Health in Education. By DR. FRANCIS WARNER. Cr. 8vo. 233 pages. Illustrated. The Macmillan Company, New York and London.

A SYSTEM OF MEDICINE. By many writers. Edited by DR. T. CLIFFORD ALLBUTT. Vol. IX. Mental Diseases and Diseases of the Skin. 8vo. 998 pages. Illustrated. The Macmillan Company, New York and London, $5.00.

ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES for the fiscal year 1898. Washington, Government Printing Office.

THE CRIMINAL. His Personnel and Environment. A Scientific Study. By A. DRAHME. Demi 8vo. 402 pages. The Macmillan Company, New York and London. $2.00.

A DICTIONARY OF TERMS USED IN MEDICINE AND THE COLLATERAL SCIENCES. By R. D. HOBLYN. 13th edition by DR. JOHN A. P. PRICE. 8vo. 838 pages. Lea Brothers & Co., Philadelphia and New York. $3.00.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION. Thirty-first Annual Session. Held at San Antonio, Texas. 8vo. 348 pages. H. A. West, M.D., Galveston, Texas, 1899.

TRANSACTIONS OF THE LOUISIANA STATE MEDICAL SOCIETY. Twentieth Annual Session. Held at New Orleans, La. 8vo. 176 pages. H. G. Gessner, M.D., Secretary, New Orleans, La., 1899.

TWENTY-NINTH ANNUAL REPORT OF THE BOARD OF COMMISSIONERS OF PUBLIC CHARITIES OF THE COMMONWEALTH OF PENNSYLVANIA FOR 1898; also the Report of the General Agent and Secretary, Statistics, and the Report of the Committee on Lunacy.

NERVOUS AND MENTAL DISEASES. A Manual for Students and Practitioners. By DR. CHARLES A. POTTS. Pocket Text-Book Series. 12mo., 455 pages. Illustrated. Lea Brothers & Co., Philadelphia and New York. $1.75.

TWENTY-FOURTH ANNUAL REPORT OF THE MANAGERS AND OFFICERS OF THE NEW JERSEY STATE HOSPITAL AT MORRIS PLAINS. For the year ending October 31st, 1899.

CONSUMPTION AND CHRONIC DISEASES. A Hygienic Cure at Patients' Home of Incipient and Advanced Cases. By DR. EMMET DENSMORE. 12mo., 198 pages. Illustrated. The Stillman Publishing Co., New York.

HOME NURSING. Modern Scientific Methods for the Care of the Sick. By EVELEEN HARRISON. 12mo., 235 pages. The Macmillan Company, New York and London. $1.00.

TRANSACTIONS OF THE MEDICAL SOCIETY OF NEW JERSEY, 1899. 8vo., 411 pages. Dr. W. J. Chandler, Secretary.

MT. SINAI HOSPITAL REPORTS. Volume I. for 1898. 8vo., 341 pages. Illustrated. 1899.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Eleventh Session. Vol. XI., 8vo., 250 pages. Illustrated.

NORDRACH AT HOME, or Hygienic Treatment of Consumption. By DR. JOS. J. S. LUCAS. 12mo., 60 pages. J. W. Arrowsmith, 11 Quay street, Bristol.

CLINICAL STUDIES IN VICE AND IN INSANITY. By DR. GEORGE R. WILSON. Demi 8vo., 234 pages. The Macmillan Company, New York. $3.00.

SIXTH ANNUAL REPORT OF THE BOARD OF MANAGERS OF CRAIG COLONY AT SONYEA, N. Y. To the State Board of Charities.

THE INTERNATIONAL TEXT-BOOK OF SURGERY. By American and British Authors. Edited by DR. J. COLLINS WARREN and DR. A. PEARCE GOULD. Volume II., Regional Surgery. 8vo., 1072 pages. Illustrated. W. B. Saunders, Philadelphia. $5.00.

SURGICAL PATHOLOGY AND THERAPEUTICS. By DR. JOHN COLLINS WARREN. Second edition. 8vo., 873 pages. Illustrated. W. B. Saunders, Philadelphia. $5.00.